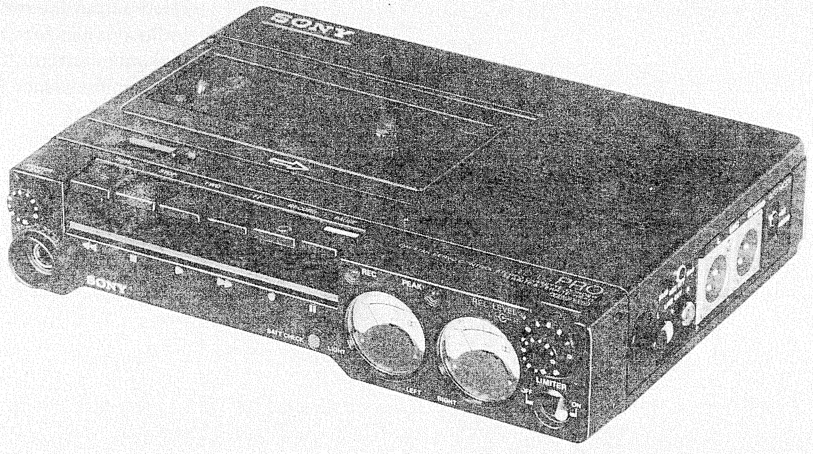
45c

TC-D5PRO

E Model



STEREO CASSETTE-CORDER

SPECIFICATIONS

Power Requirements: 3 V dc, two batteries (size D) IEC designation R20

Battery Life: Approx. 4.5 hours with Eveready Alkaline Batteries No. E95
Approx. 1.5 hours with Sony Super Batteries SUM-1S

Dimensions: Approx. 237 (w) x 48 (h) x 168 (d) mm
9 3/8 (w) x 1 7/8 (h) x 6 5/8 (d) inches
including projecting parts and controls

Weight: Approx. 1.7 kg, 3 lb 12 oz
including batteries

Recording System: 4-track 2-channel stereo

Tape Speed Deviation: ±1 %

Fast Winding Time: Approx. 150 sec. with Sony Cassette C-60

Operating Temperature: 0°C to 40°C (32°F – 104°F)

Frequency Response: DOLBY NR OFF

- With Ferri-Chrome Cassette (TAPE SELECT: TYPE III)
  40–16,000 Hz ±3 dB (NAB)
  40–16,000 Hz (DIN)
- With CrO_2 type cassette
  40–15,000 Hz ±3 dB (NAB)
  40–15,000 Hz (DIN)
- With standard cassette (TAPE SELECT: TYPE I)
  40–12,000 Hz ±3 dB (NAB)
  40–12,000 Hz (DIN)

S/N Ratio: DOLBY NR OFF

- With Ferri-Chrome Cassette (TAPE SELECT: TYPE III)
  58 dB at peak level (NAB)
  57 dB (DIN, 1975 rev.)
- With Chromium Dioxide Cassette
  55 dB at peak level (NAB)
- With standard cassette (TAPE SELECT: TYPE I)
  53 dB at peak level (NAB)

DOLBY NR ON
Improved by 6 dB

Torque Measurement	
FWD torque	28 – 48 g·cm (0.39 – 0.66 oz·inch)
FF torque	more than 100 g·cm (1.38 oz·inch)
REW torque	more than 70 g·cm (0.96 oz·inch)
Back-tension torque	less than 5 g·cm (0.07 oz·inch)

– Continued on page 2 –

This set is equipped with DOLBY FM circuit.
'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories. Noise reduction system manufactured under license from Dolby Laboratories.

SONY®

SERVICE MANUAL

Inputs: Two microphone input connectors
(Cannon Connectors XLR-3-32 type),
balanced sensitivity 0.25 mV
(−70 dB) for low impedance
microphone with Cannon Connector XLR-3-IIC

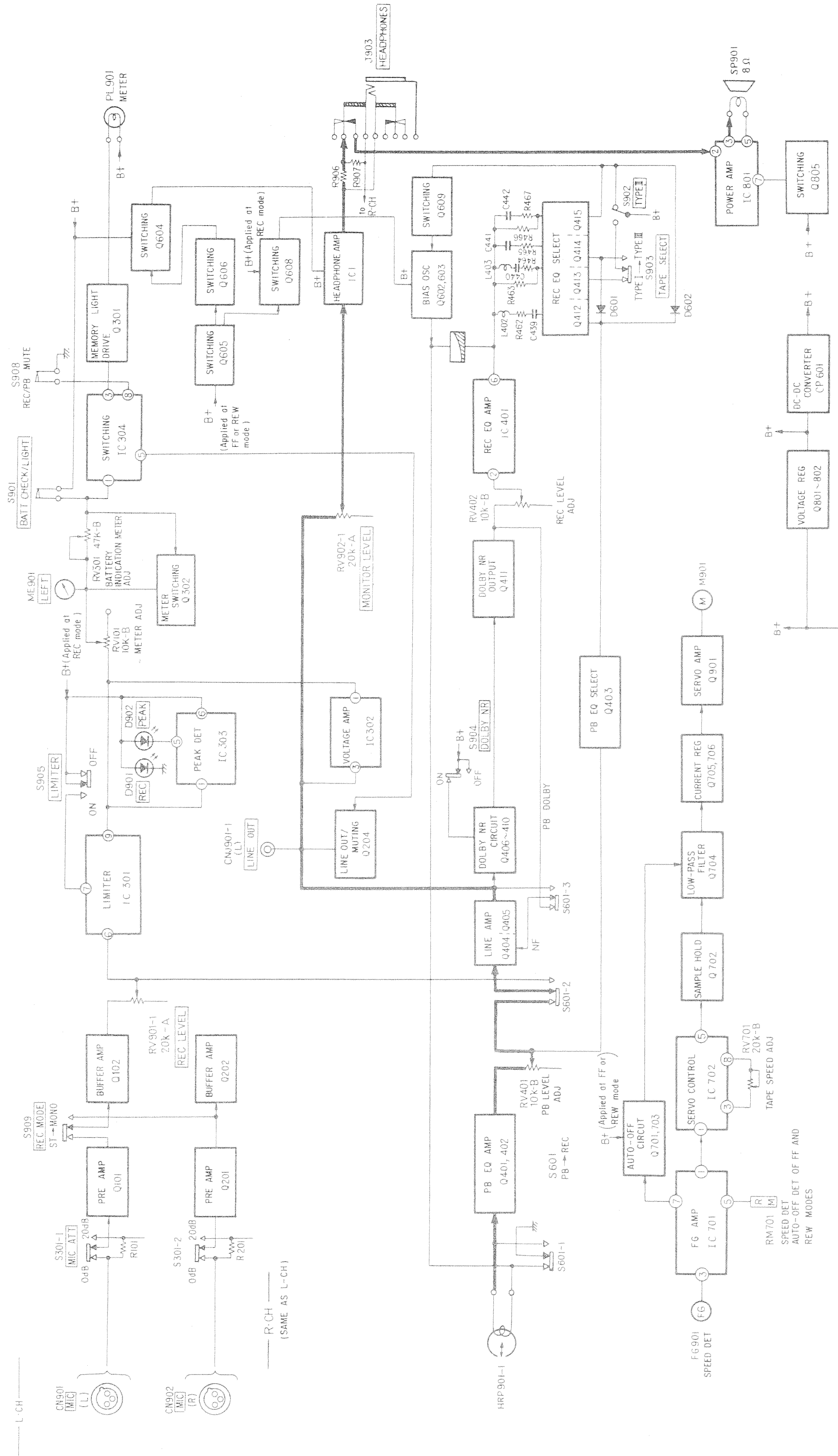
Outputs: Two line output jacks (phono jack)
load impedance 10 kΩ or higher
rated output 0.435 V (−5 dB) at load
impedance 47 kΩ
Headphones jack (stereo binaural jack)
for low impedance headphones
rated output 0.2 mW
(at load impedance 8 Ω)
maximum output 20 mW
(at load impedance 8 Ω)

$\boxed{0\text{ dB} = 0.775\text{ V}}$

SECTION 1

OUTLINE

1-1. BLOCK DIAGRAM


L-CH
CN901 MIC (L)
CN902 MIC (R)
R-CH (SAME AS L-CH)
S301-1 MIC ATT
0dB 20dB
R101
S301-2
R201
PRE AMP Q101
PRE AMP Q201
S909 REC MODE ST→MONO
BUFFER AMP Q102
BUFFER AMP Q202
RV901-1 20k-A REC LEVEL
LIMITER IC301
S905 LIMITER
ON OFF
D901 REC
D902 PEAK
PEAK DET IC303
B+ (Applied at REC mode)
RV101 10k-B METER ADJ
ME901 LEFT
RV301 47k-B BATTERY INDICATION METER ADJ
METER SWITCHING Q302
S901 BATT CHECK/LIGHT
SWITCHING IC304
S908 REC/PB MUTE
MEMORY LIGHT DRIVE Q301
SWITCHING Q604
PL901 METER
B+
SWITCHING Q605
B+ (Applied at FF or REW mode)
SWITCHING Q606
SWITCHING Q608
B+ (Applied at REC mode)
HEADPHONE AMP IC1
R906
R907
to R-CH
J903 HEADPHONES
VOLTAGE AMP IC302
LINE OUT/MUTING Q204
CN901-1 (L) LINE OUT
RV902-1 20k-A MONITOR LEVEL
BIAS OSC Q602,603
SWITCHING Q609
HRP901-1
S601-1
S601 PB→REC
PB EQ AMP Q401,402
RV401 10k-B PB LEVEL ADJ
S601-2
LINE AMP Q404,Q405
NF
S601-3
DOLBY NR CIRCUIT Q406~410
S904 DOLBY NR
ON OFF
PB DOLBY
DOLBY NR OUTPUT Q411
RV402 10k-B
REC LEVEL ADJ
REC EQ AMP IC401
L402
R462
C439
R463
L403
C441
C442
R464
R465
R466
R467
REC EQ SELECT Q412 Q413 Q414 Q415
D601
D602
S902 TYPE I
S903 TAPE SELECT
TYPE I→TYPE II
PB EQ SELECT Q403
B+ (Applied at FF or REW mode)
AUTO-OFF CIRCUT Q701,703
FG901 SPEED DET
FG
FG AMP IC701
RM701 SPEED DET AUTO-OFF DET OF FF AND REW MODES
SERVO CONTROL IC702
RV701 20k-B TAPE SPEED ADJ
SAMPLE HOLD Q702
LOW-PASS FILTER Q704
CURRENT REG Q705,706
SERVO AMP Q901
M901
POWER AMP IC801
SP901 8Ω
SWITCHING Q805
DC-DC CONVERTER CP601
VOLTAGE REG Q801~802
BATTERISS UM-1×2 3V

1-2. MECHANICAL OPERATION

- **Disc Drive System**

An elastic rubber coating is applied to the flywheel and the motor pulley is pressed directly against this rubber coating to drive the flywheel.

The compliance of this elastic materials and the inertial mass of the flywheel together function as a mechanical filter, to eliminate any flutter components above approximately 100Hz.

Motor torque increases in inverse proportion to the reduction ratio between the motor and the flywheel.

Meanwhile, since the inertial mass of the flywheel itself is low, excellent start-up characteristics (The time from start-up to rated speed is less than 0.2 sec) and anti-rolling effect are obtained.

- **Capstan Servo Control Mechanism**

The speed is detected through the flywheel which is directly coupled to the capstan, to apply the servo control.

As shown in Fig. 1-1, the bearing assembly comprises a bias magnet, coil, and stator.

The flywheel has a rotor and the coil senses fluctuations in magnetic flux caused by variations in the air gap between the rotor and the stator, to generate the servo control frequencies.

This serves to remove any wow components from 10Hz down to the vicinity of DC, to improve the anti-rolling effect.

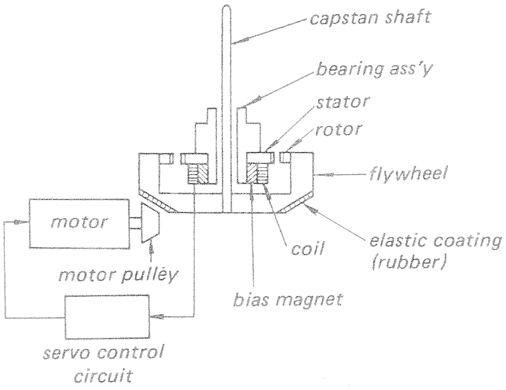
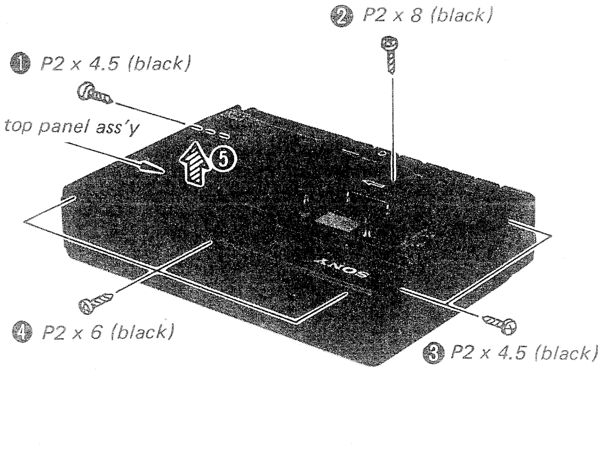


Fig. 1-1

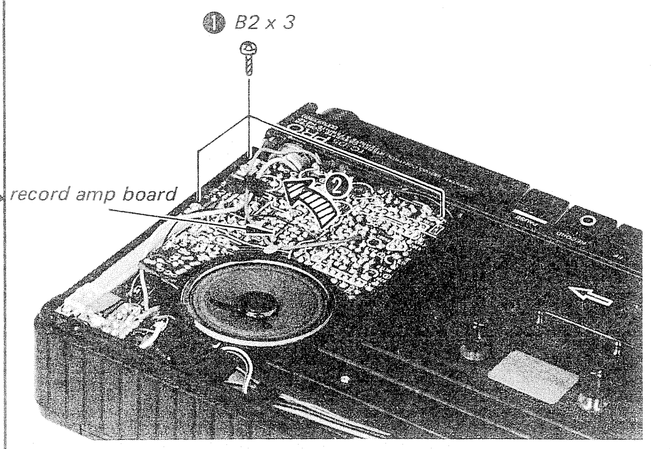
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

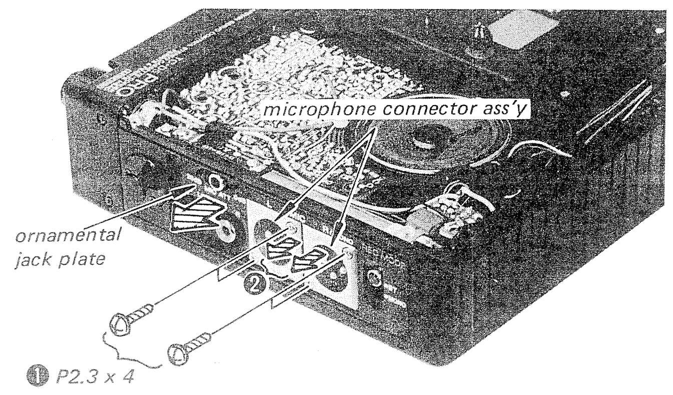
Top Panel


❷ P2 x 8 (black)
❶ P2 x 4.5 (black)
top panel ass'y
⑤
❹ P2 x 6 (black)
❸ P2 x 4.5 (black)

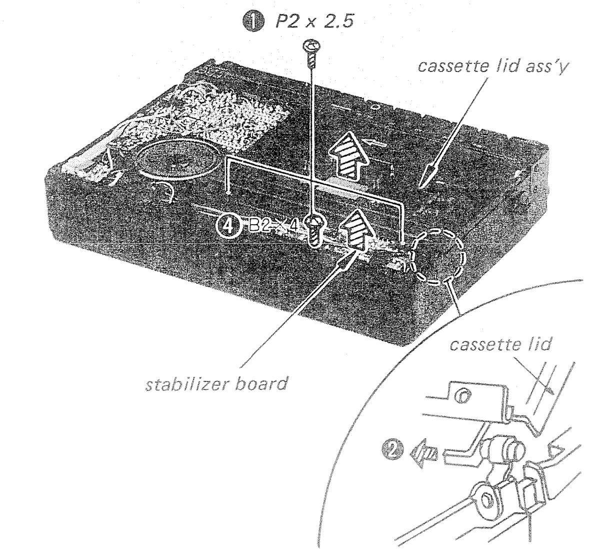
Record Amp Board


❶ B2 x 3
record amp board
②

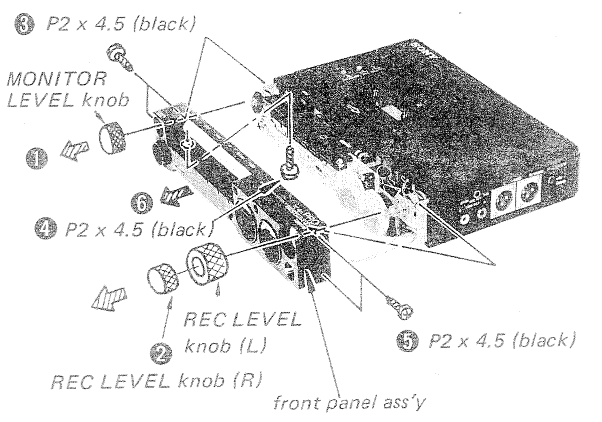
Microphone Connector Ass'y and Ornamental Jack Plate


microphone connector ass'y
ornamental jack plate
②
❶ P2.3 x 4

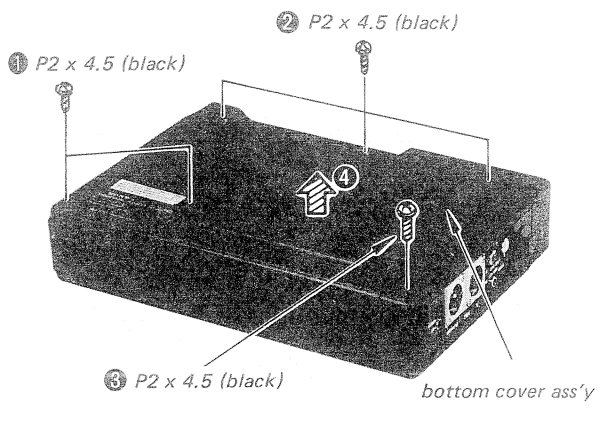
Cassette Lid Ass'y and Stabilizer Board


❶ P2 x 2.5
cassette lid ass'y
④ B2 x 4
stabilizer board
cassette lid
②

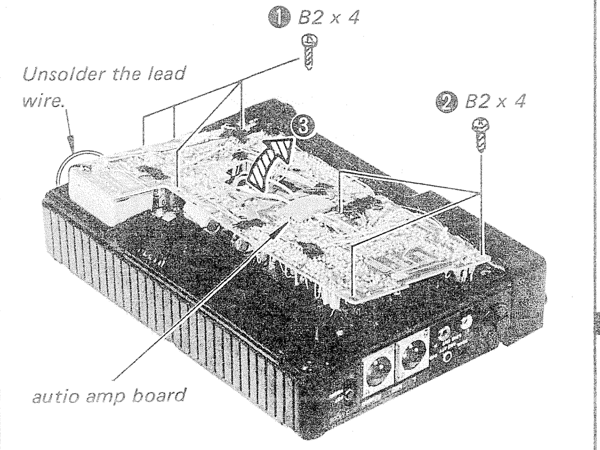
Fron Panel


❸ P2 x 4.5 (black)
MONITOR LEVEL knob
❶
⑥
❹ P2 x 4.5 (black)
REC LEVEL knob (L)
❷
REC LEVEL knob (R)
❺ P2 x 4.5 (black)
front panel ass'y

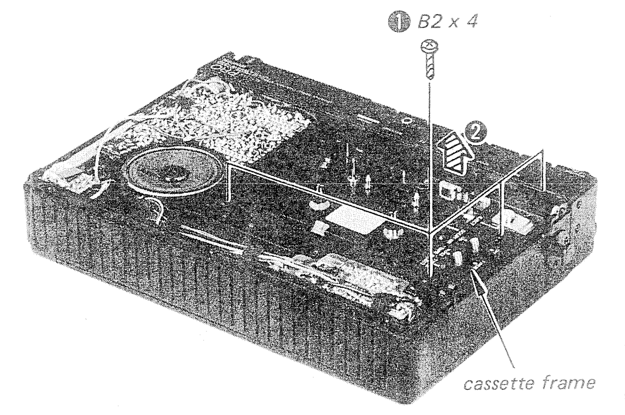
Bottom Cover


❶ P2 x 4.5 (black)
❷ P2 x 4.5 (black)
④
❸ P2 x 4.5 (black)
bottom cover ass'y

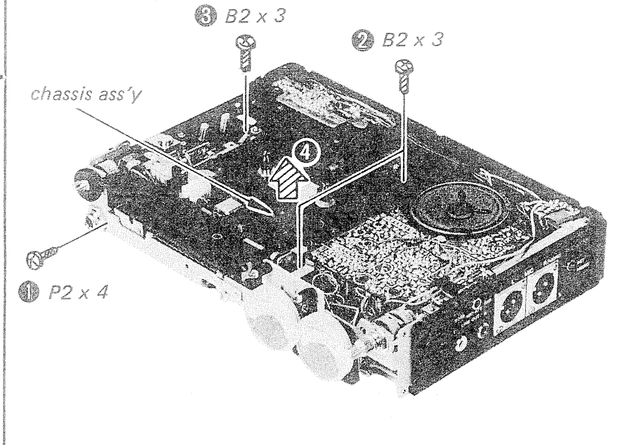
Audio Amp Board


❶ B2 x 4
Unsolder the lead wire.
③
❷ B2 x 4
autio amp board

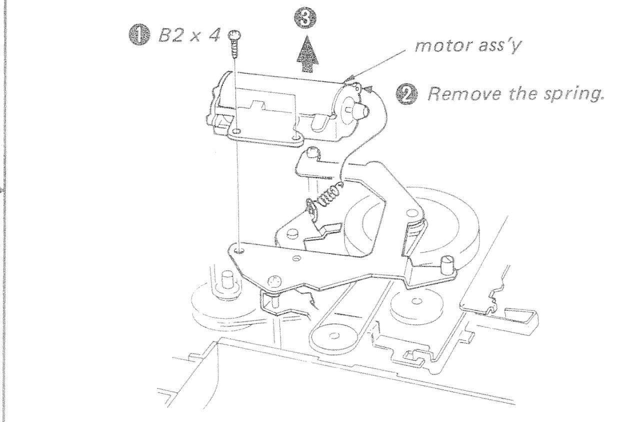
Cassette Frame


❶ B2 x 4
②
cassette frame

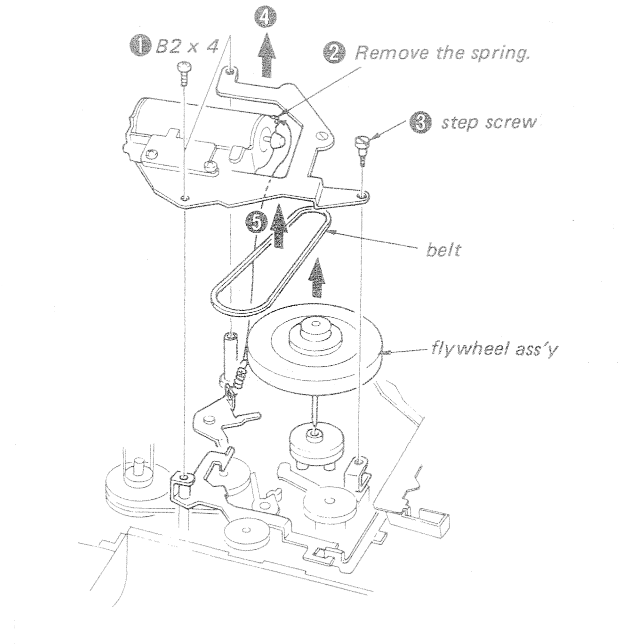
Chassis Ass'y


❸ B2 x 3
❷ B2 x 3
chassis ass'y
④
❶ P2 x 4

Motor Ass'y


❶ B2 x 4
❸
motor ass'y
❷ Remove the spring.

Flywheel Ass'y


❶ B2 x 4
❹
❷ Remove the spring.
❸ step screw
❺
belt
flywheel ass'y

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

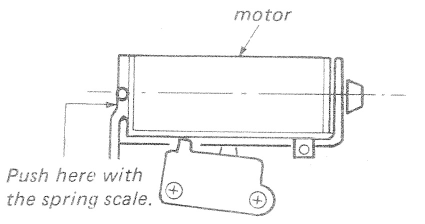
1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

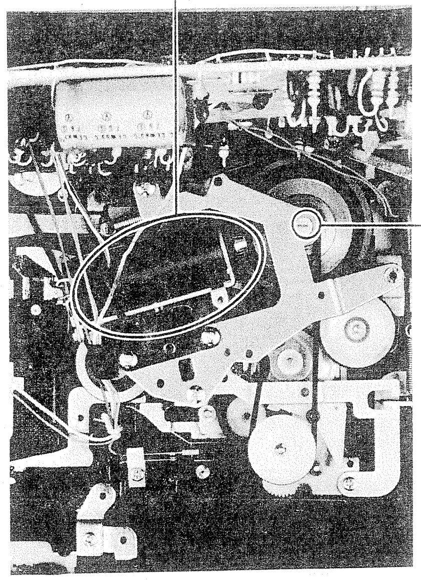
2. Demagnetize the rocrd/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Motor Pressure Measurement
– playback mode –

1. Place the set vertically.
2. Push the end of motor with the spring scale as shown. The flywheel will not stop rotating.
3. Measure the pressure of motor against the flywheel when the flywheel starts to rotate, while returning the spring scale slowly.

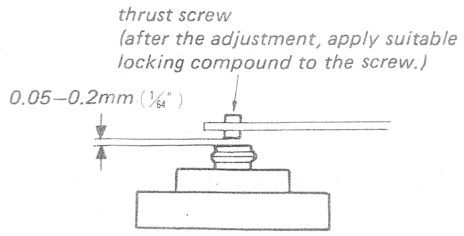

motor
Push here with the spring scale.

Specification: 50–90g (1.76–3.17 oz)



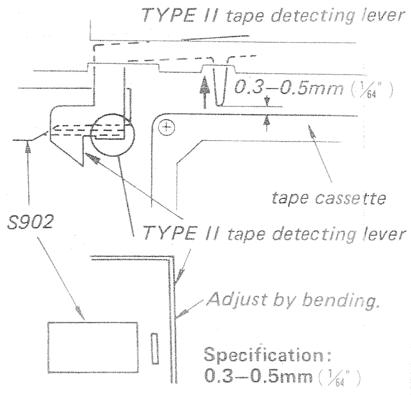
Flywheel Thrust Play Adjustment
– playback mode –

1. Connect a dc voltmeter across the motor.
2. Turn the screw clockwise for the position where the meter reading suddenly increases.
3. Loosen the screw ¼ turn from the position obtained in step 2.

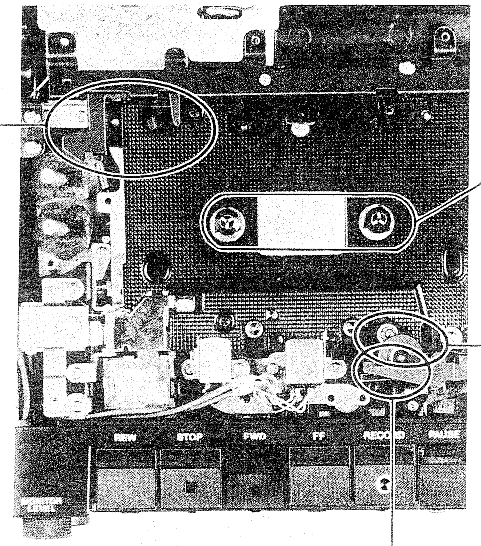

thrust screw
(after the adjustment, apply suitable locking compound to the screw.)
0.05–0.2mm (1/64")

TYPE II Tape Detecting Lever Adjustment – stop mode –

1. Insert the tape cassette (except for TYPE II tape) into the set.
2. Push the CrO_2 tape detecting lever in the direction of the arrow.
   Make sure that the clearance between the cassette and TYPE II tape detecting lever is 0.3–0.5mm (1/64"). If necessary, bend the lever.
3. Make sure that the miniature switch (S902) is turned off when returning the TYPE II tape detecting lever to the original position.


TYPE II tape detecting lever
0.3–0.5mm (1/64")
tape cassette
S902
TYPE II tape detecting lever
Adjust by bending.

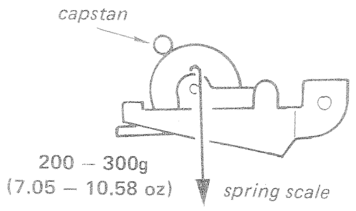
Specification: 0.3–0.5mm (1/64")


REW
STOP
FWD
FF
RECORD
PAUSE

Torque Measurement	
FWD torque	28 – 48 g·cm (0.39 – 0.66 oz·inch)
FF torque	more than 100 g·cm (1.38 oz·inch)
REW torque	more than 70 g·cm (0.96 oz·inch)
Back-tension torque	less than 5 g·cm (0.07 oz·inch)

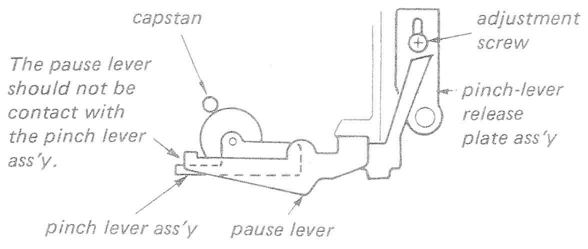
Pinch Roller Pressure Adjustment
– playback mode –

1. Hook the pinch roller with a spring scale.
2. Pull the spring scale.
3. Slowly return the pinch roller and read the spring scale as soon as the pinch roller starts to rotate.


capstan
200 – 300g
(7.05 – 10.58 oz)
spring scale

Pause Timing Adjustment
– playback mode –

1. Adjust the position of pinch-lever release plate ass'y so that the pinch roller and the take-up reel spindle stop rotating at the same time when depressing the PAUSE button slowly.
2. Make sure that the pinch roller touches the capstan after the take-up reel spindle starts to rotate when the PAUSE button is released.


capstan
The pause lever should not be contact with the pinch lever ass'y.
adjustment screw
pinch-lever release plate ass'y
pinch lever ass'y
pause lever

3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE SELECT switch in accordance with the tape used as follows.

Tape	TAPE SELECT switch
CS-10	TYPE I
CS-20	TYPE II
CS-30	TYPE III

Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch:	OFF
TAPE SELECT switch:	TYPE I
LIMITER switch:	OFF
MIC ATT switch:	0 dB

Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

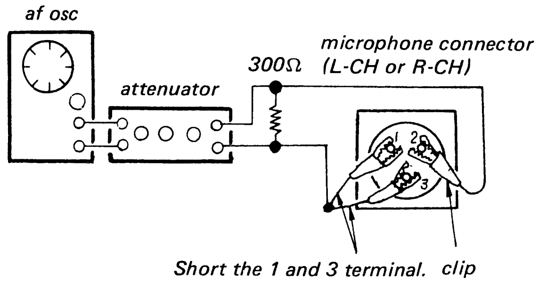
Standard Input Level

	MIC
source impedance	300Ω
input level	0.77mV (−60dB)

Standard Output Level

	LINE OUT
load impedance	100kΩ
output level	0.44V (−5dB)

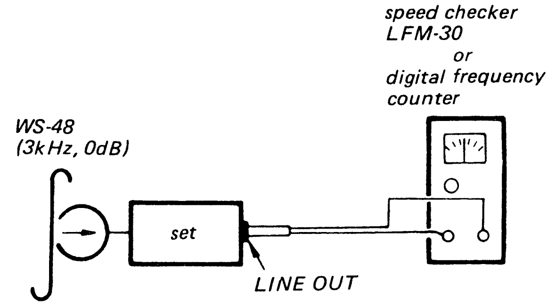
Input Signal Connection for Record Bias Record Level Adjustments, Level Meter Calibration


af osc
attenuator
300Ω
microphone connector
(L-CH or R-CH)
1
2
3
Short the 1 and 3 terminal.
clip

Tape Speed Adjustment

Procedure:

Mode: Playback


speed checker
LFM-30
or
digital frequency counter
WS-48
(3kHz, 0dB)
set
LINE OUT

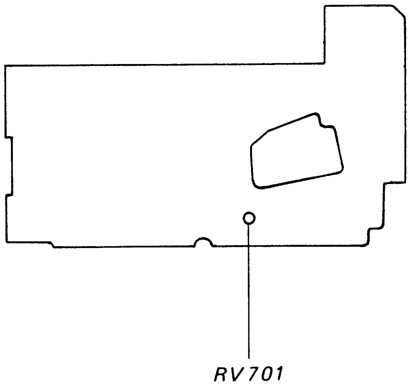
Adjust RV701 to obtain the specified value below.

Specification:

Speed checker	Digital frequency counter
−1.0 ~ +1.0%	2,970 ~ 3,030Hz

Adjustment Location:

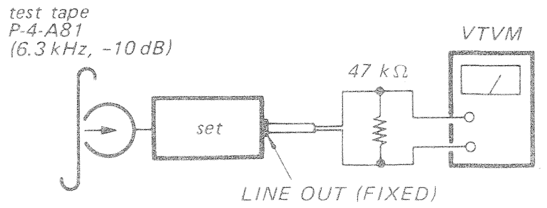
– audio amp board (conductor side) –



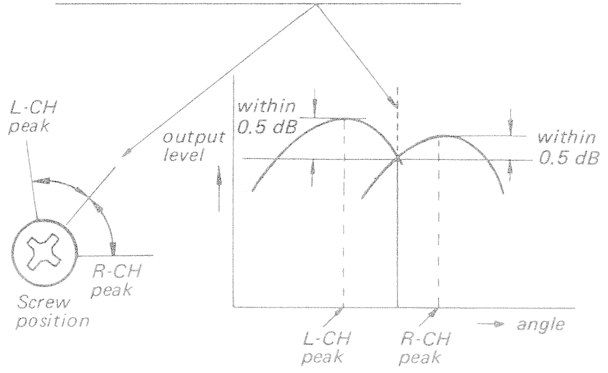
Record/playback Head Azimuth Adjustment

Procedure:

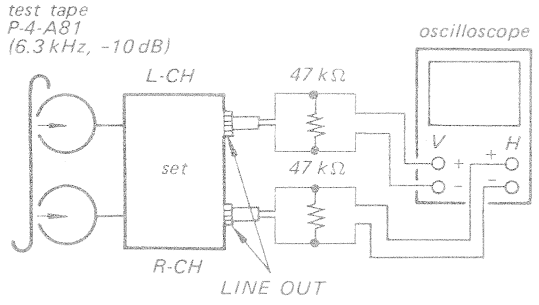
1. Mode: playback

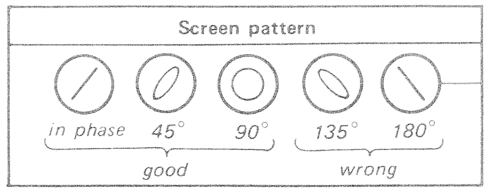

test tape
P-4-A81
(6.3 kHz, -10 dB)
VTVM
47 kΩ
set
LINE OUT (FIXED)

2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw where both of output levels match together within 0.5 dB.

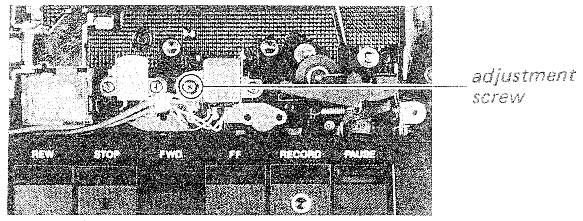


3. Phase Check
   Mode: playback


test tape
P-4-A81
(6.3 kHz, -10 dB)
L-CH
47 kΩ
oscilloscope
set
47 kΩ
V
H
R-CH
LINE OUT


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

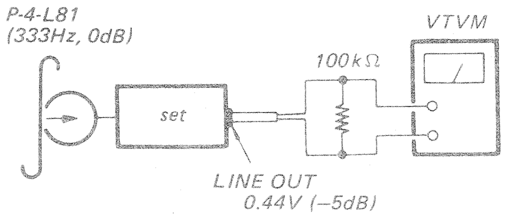
Adjustment Location:


adjustment
screw
REW
STOP
FWD
FF
RECORD
PAUSE

Playback Level Adjustment

Procedure:

1. Mode: Playback


P-4-L81
(333Hz, 0dB)
VTVM
100kΩ
set
LINE OUT
0.44V (–5dB)

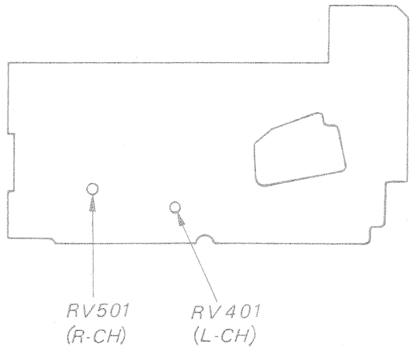
2. Adjust RV401 (L-CH) and RV501 (R-CH) to obtain 0.56V (–3dB) VTVM reading.
3. Make sure that the LINE OUT level does not change when the mode is changed from playback to stop several times.

Specification:

LINE OUT level: 0.52 – 0.58V
(–3.5 to –2.5dB)

Adjustment Location:

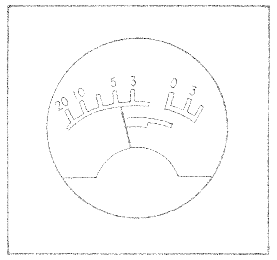
– audio amp board (conductor side) –


RV501
(R-CH)
RV401
(L-CH)

Battery Indication Meter Calibration

Procedure:

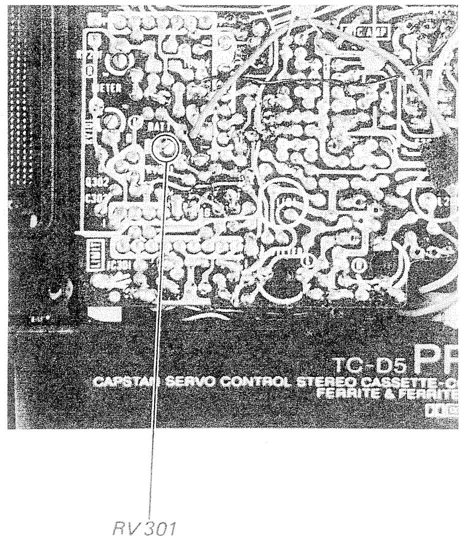
1. Mode: Playback (with no cassette installed)
2. Feed 2.2V dc to the battery terminals.
3. When the BATT CHECK/LIGHT button is pushed, adjust RV301 so that the meter indicates the position as shown below.



level meter

Adjustment Location:

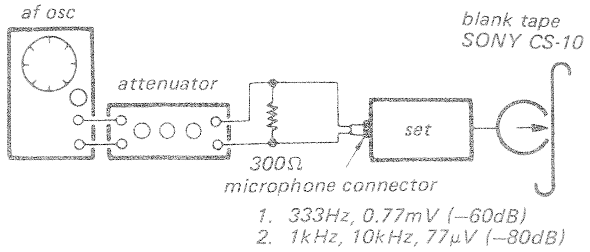
– record amp board –


TC-D5 PR
CAPSTAN SERVO CONTROL STEREO CASSETTE-C
FERRITE & FERRITE
RV301

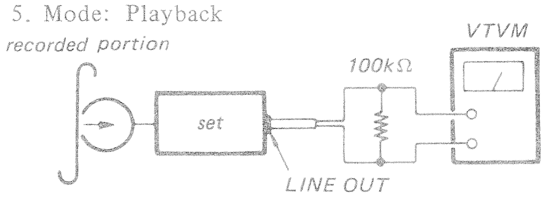
Record Bias Adjustment

Procedure:

1. Mode: Record
   TAPE SELECT switch: TYPE I
   LIMITER switch: OFF


af osc
attenuator
blank tape
SONY CS-10
set
300Ω
microphone connector
1. 333Hz, 0.77mV (–60dB)
2. 1kHz, 10kHz, 77µV (–80dB)

2. Feed a signal of 333Hz, 0.77mV (–60dB) into the microphone connector.
3. Playback the signal of 333Hz and adjust the REC LEVEL control for –5dB (0.44V) on the VTVM.
4. Feed the signals of 1kHz and 10kHz, 77µV (–80dB) into the microphone connector.
5. Mode: Playback


recorded portion
VTVM
100kΩ
set
LINE OUT

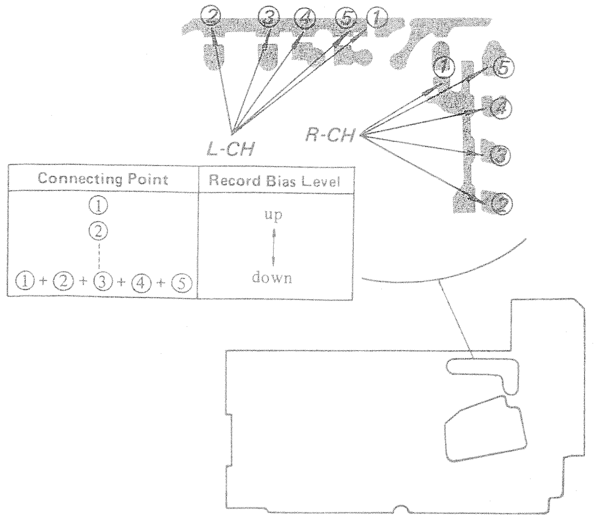
6. Playback the signals of 1kHz and 10kHz. Confirm the playback signal levels are as follows. If necessary, change the pattern connection and repeat the steps given above.

Specification:

±0.5dB or less (10kHz level deviation from 1kHz)

Adjustment Location:

– audio amp board (conductor side) –

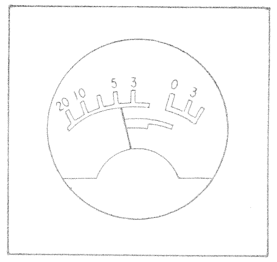

②
③
④
⑤
①
①
⑤
④
③
②
L-CH
R-CH

Connecting Point	Record Bias Level
①	up
②	↕
⋮	
①+②+③+④+⑤	down

Battery Indication Meter Calibration

Procedure:

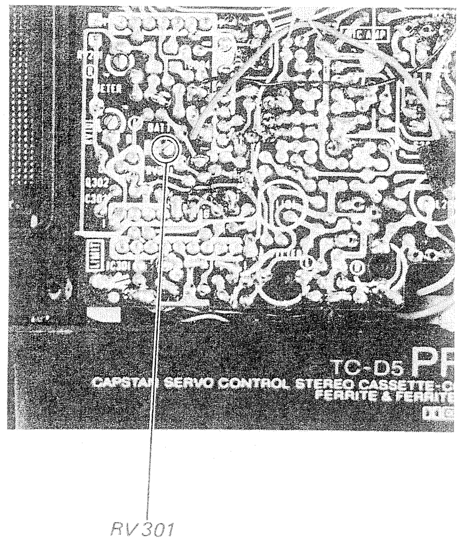
1. Mode: Playback (with no cassette installed)
2. Feed 2.2V dc to the battery terminals.
3. When the BATT CHECK/LIGHT button is pushed, adjust RV301 so that the meter indicates the position as shown below.



level meter

Adjustment Location:

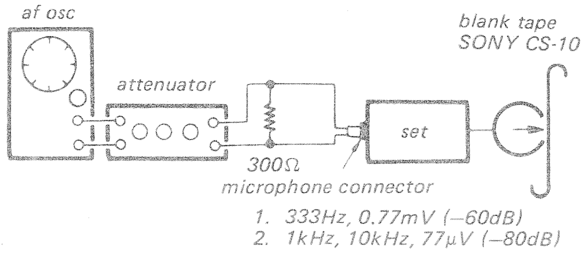
– record amp board –


BATT
METER
TC-D5 PR
CAPSTAN SERVO CONTROL STEREO CASSETTE-C
FERRITE & FERRITE
RV301

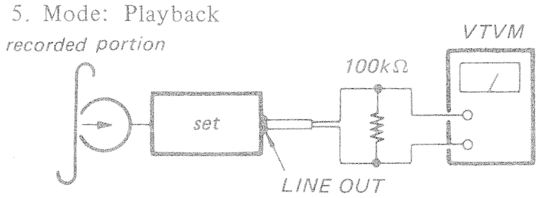
Record Bias Adjustment

Procedure:

1. Mode: Record
   TAPE SELECT switch: TYPE I
   LIMITER switch: OFF


af osc
blank tape
SONY CS-10
attenuator
set
300Ω
microphone connector
1. 333Hz, 0.77mV (–60dB)
2. 1kHz, 10kHz, 77μV (–80dB)

2. Feed a signal of 333Hz, 0.77mV (–60dB) into the microphone connector.
3. Playback the signal of 333Hz and adjust the REC LEVEL control for –5dB (0.44V) on the VTVM.
4. Feed the signals of 1kHz and 10kHz, 77μV (–80dB) into the microphone connector.
5. Mode: Playback


VTVM
recorded portion
100kΩ
set
LINE OUT

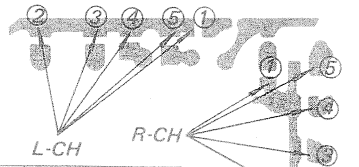
6. Playback the signals of 1kHz and 10kHz. Confirm the playback signal levels are as follows. If necessary, change the pattern connection and repeat the steps given above.

Specification:

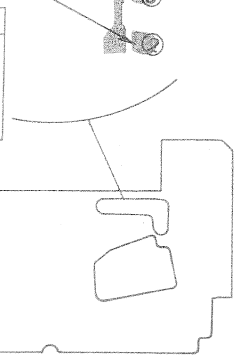
±0.5dB or less (10kHz level deviation from 1kHz)

Adjustment Location:

– audio amp board (conductor side) –


②
③
④
⑤
①
①
⑤
④
③
②
L-CH
R-CH

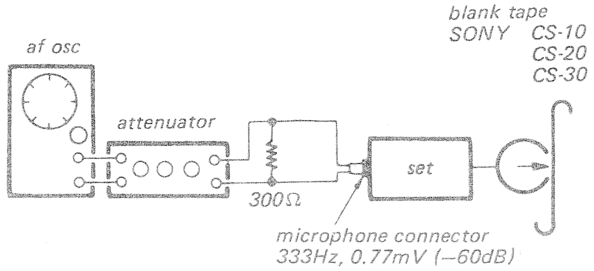
Connecting Point	Record Bias Level
①	up
②	↕
①+②+③+④+⑤	down



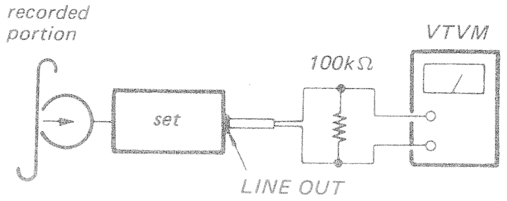
Record Level Adjustment

Procedure:

1. Mode: Standard record (See page 9)
   MIC ATT switch: 0dB
   LIMITER switch: OFF


blank tape
SONY CS-10
CS-20
CS-30
af osc
attenuator
set
300Ω
microphone connector
333Hz, 0.77mV (–60dB)

2. Mode: Playback


recorded portion
VTVM
100kΩ
set
LINE OUT

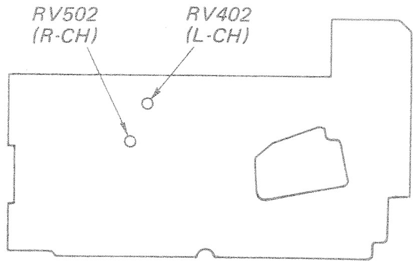
3. Adjust RV402 (L-CH) and RV502 (R-CH) to obtain the specified VTVM reading.

Specification:

Tape	TAPE SELECT or TYPE II switch	LINE OUT level
CS-10	TYPE I	0.40 – 0.45V (–6.0 to –5.0dB)
CS-20	automatically changed to TYPE II position.	0.31 – 0.50V (–8.0 to –4.0dB)
CS-30	TYPE III	

Adjustment Location:

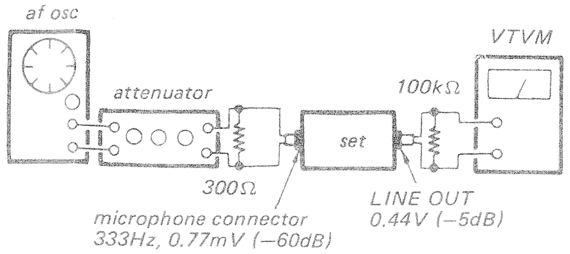
– audio amp board (Conductor Side) –


RV502
(R-CH)
RV402
(L-CH)

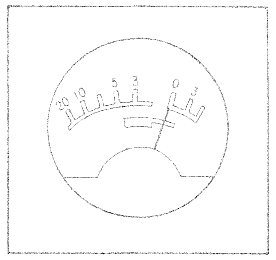
Level Meter Calibration

Procedure:

1. Mode: Standard record (See page 9.)
   MIC ATT switch: 0dB
   LIMITER switch: OFF


af osc
VTVM
attenuator
100kΩ
set
300Ω
LINE OUT
0.44V (–5dB)
microphone connector
333Hz, 0.77mV (–60dB)

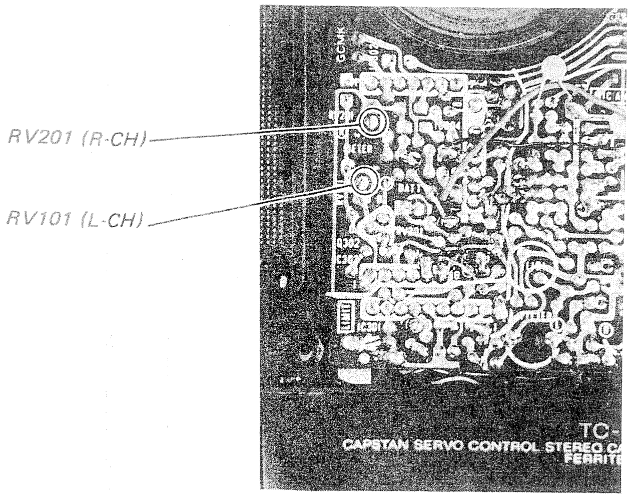
2. Make sure that the VTVM reads 0.44V (–5dB).
3. Adjust RV101 (L-CH) and RV201 (R-CH) for specified reading on the level meter.



level meter

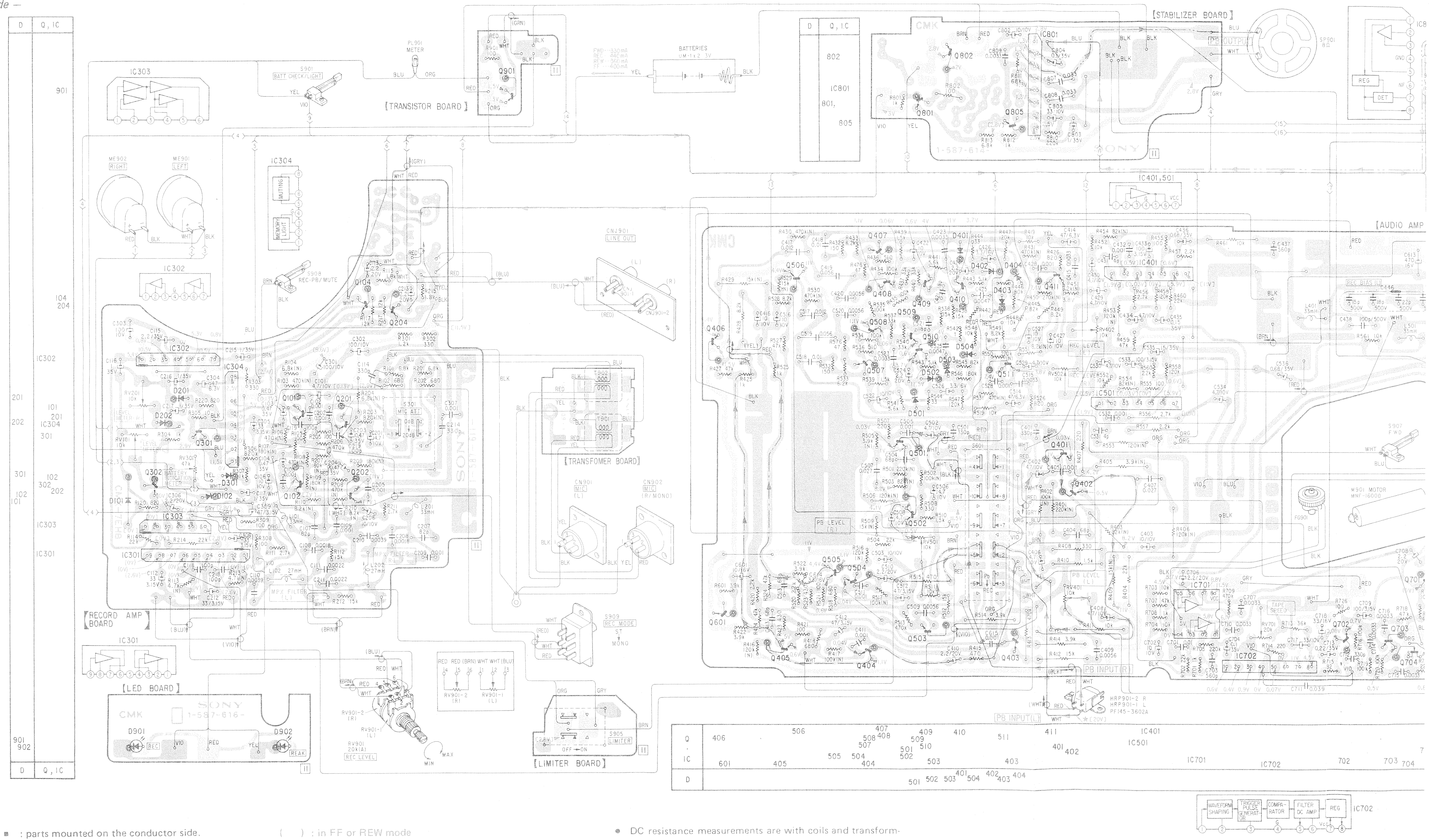
Adjustment Location:

– record amp board –


RV201 (R-CH)
RV101 (L-CH)
TC-
CAPSTAN SERVO CONTROL STEREO C
FERRIT

SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM
— Conductor Side —


[TRANSISTOR BOARD]
[STABILIZER BOARD]
[TRANSFOMER BOARD]
[RECORD AMP BOARD]
[LED BOARD]
[LIMITER BOARD]
[AUDIO AMP
BATTERIES UM-1×2 3V
S901 BATT CHECK/LIGHT
PL901 METER
ME902 RIGHT
ME901 LEFT
S908 REC-PB/MUTE
CNJ901 LINE OUT
CN901 MIC (L)
CN902 MIC (R/MONO)
S909 REC MODE ST MONO
S905 LIMITER OFF ON
RV901 20k(A) REC LEVEL
PB LEVEL (R)
PB LEVEL (L)
PB INPUT (R)
PB INPUT (L)
HRP901-2 R
HRP901-1 L
PF145-3602A
SP901 8Ω
M901 MOTOR MNF-16000
S907 FWD
IC702
WAVEFORM SHAPING
TRIGGER PULSE GENERATOR
COMPARATOR
FILTER DC AMP
REG

Note: ■ : parts mounted on the conductor side.

▨ : B+ pattern.

——→ : L-CH playback signal path

— — → : R-CH playback signal path

★ : Measured by using a VTVM

[ ] : in record mode

( ) : in FF or REW mode

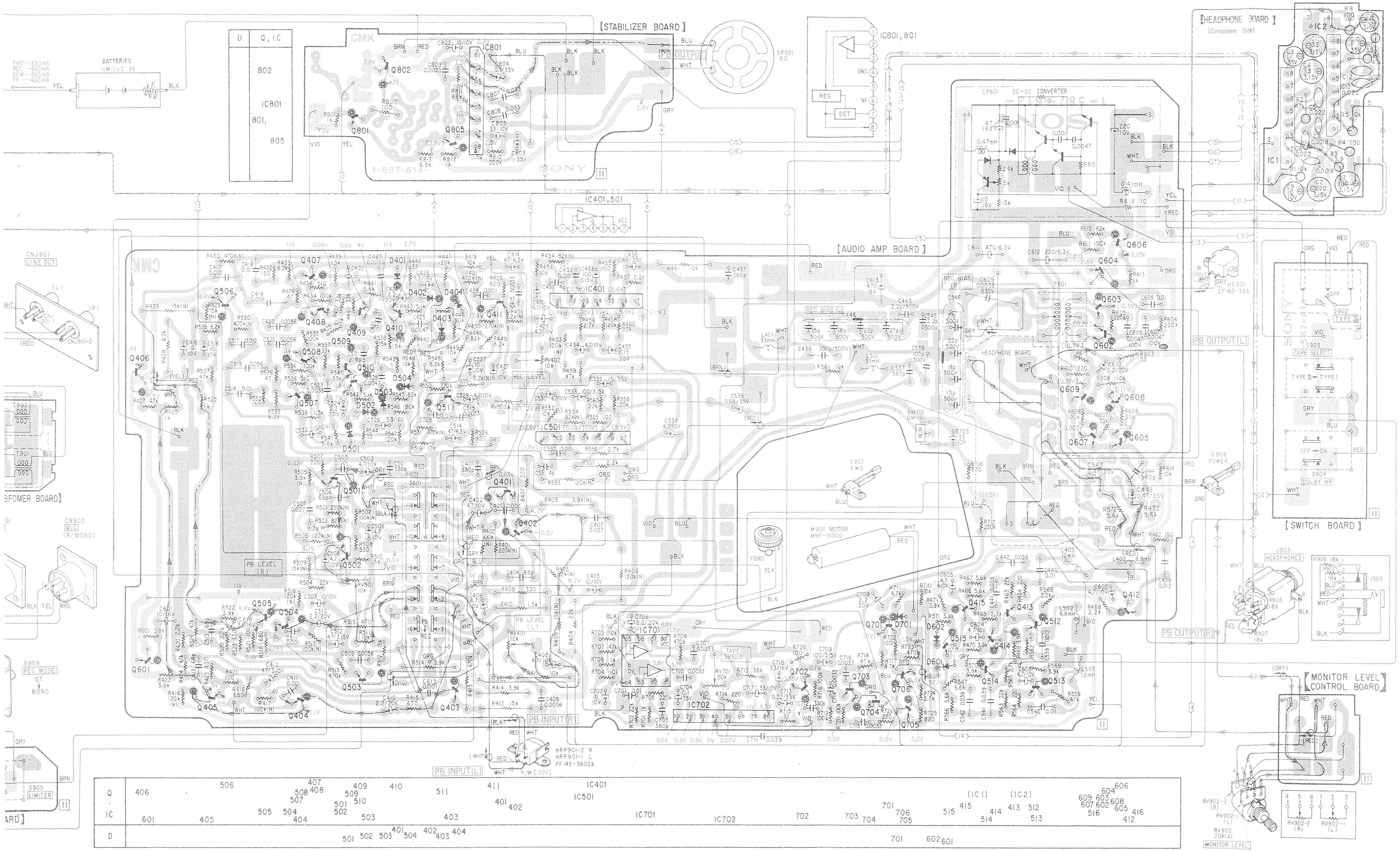
| | : When S905 (LIMITER) is set to ON in record mode.

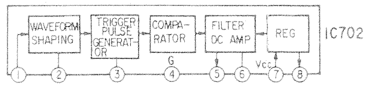
(( )) : When S902 (TYPE II) is OFF and S903 (TAPE SELECT) is set to TYPE I in record mode.

no mark: in playback mode

The total current is taken with cassette installed.

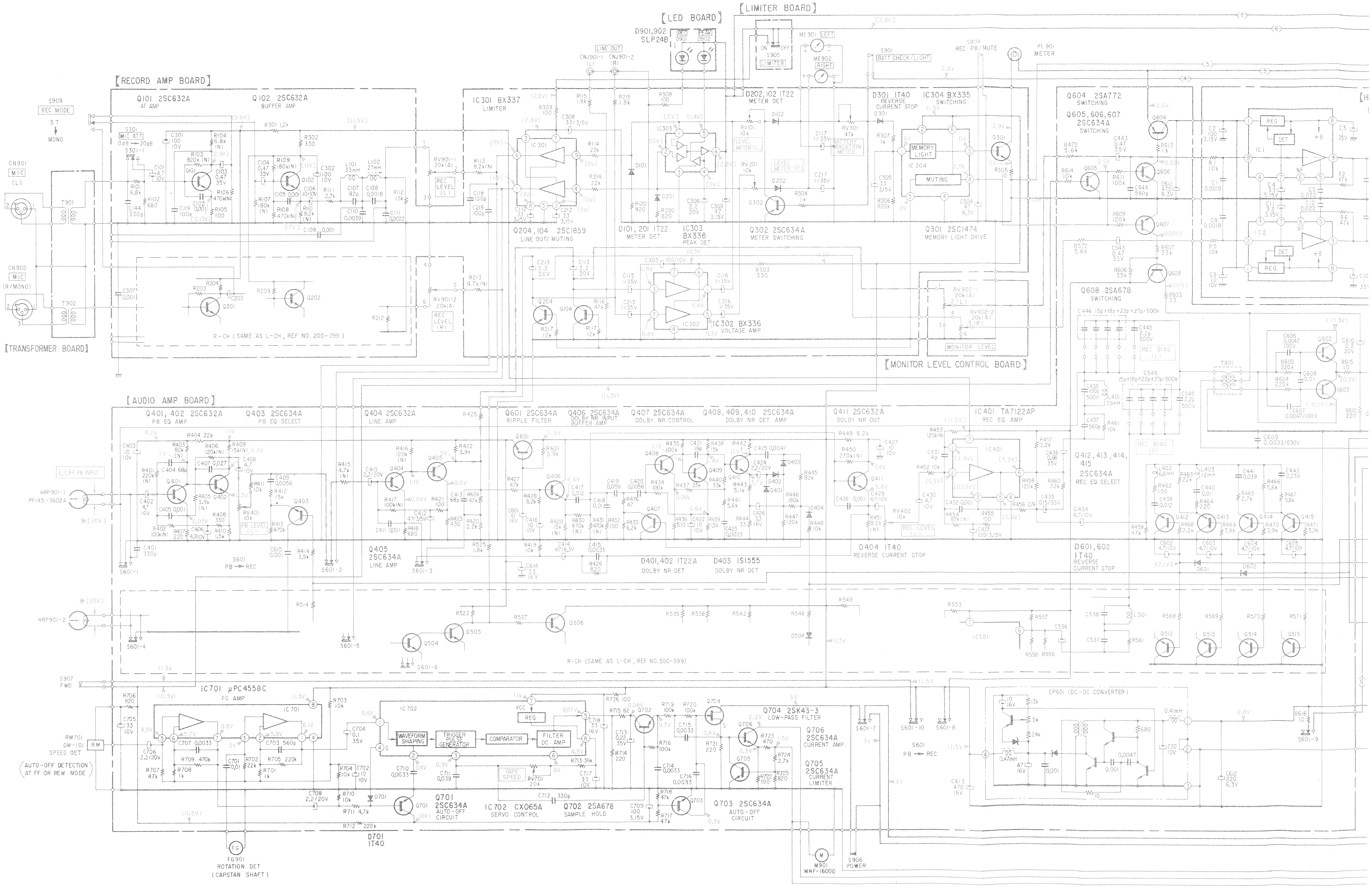
- DC resistance measurements are with coils and transformers connected on the circuit board, and are approximate.


[STABILIZER BOARD]
[AUDIO AMP BOARD]
[HEADPHONE BOARD] (Component Side)
[SWITCH BOARD]
[MONITOR LEVEL CONTROL BOARD]
TRANSFOMER BOARD]
IC801, 801
IC401, 501
DC-DC CONVERTER
M901 MOTOR MNF-16000
SP501 8Ω
BATTERIES UM-1×2 3V
CNJ901 LINE OUT
CNJ902 MIC (R/MONO)
J903 HEADPHONES
S902 TYPE II
S903 TAPE SELECT
S904 DOLBY NR
S905 LIMITER
S906 POWER
S907 FWD
S909 REC MODE ST MONO
PB LEVEL (R)
PB LEVEL (L)
PB OUTPUT (L)
PB OUTPUT (R)
PB INPUT (L)
PB INPUT (R)
REC BIAS (L)
REC BIAS (R)
TAPE SPEED
HE901 EF168-36A
HRP901-2 R
HRP901-1 L
PF145-3602A
RV902-2 (R)
RV902-1 (L)
RV902 20k(A) MONITOR LEVEL
Q · IC
406 506 407 508 408 507 409 509 501 510 502 410 511 411 401 402 IC401 IC501 (IC1) (IC2) 415 414 413 512 609 603 604 606 607 602 608 605 516 416 412
601 405 505 504 404 503 403 IC701 IC702 702 703 704 701 706 705 515 514 513
D
501 502 503 401 504 402 403 404 701 602 601

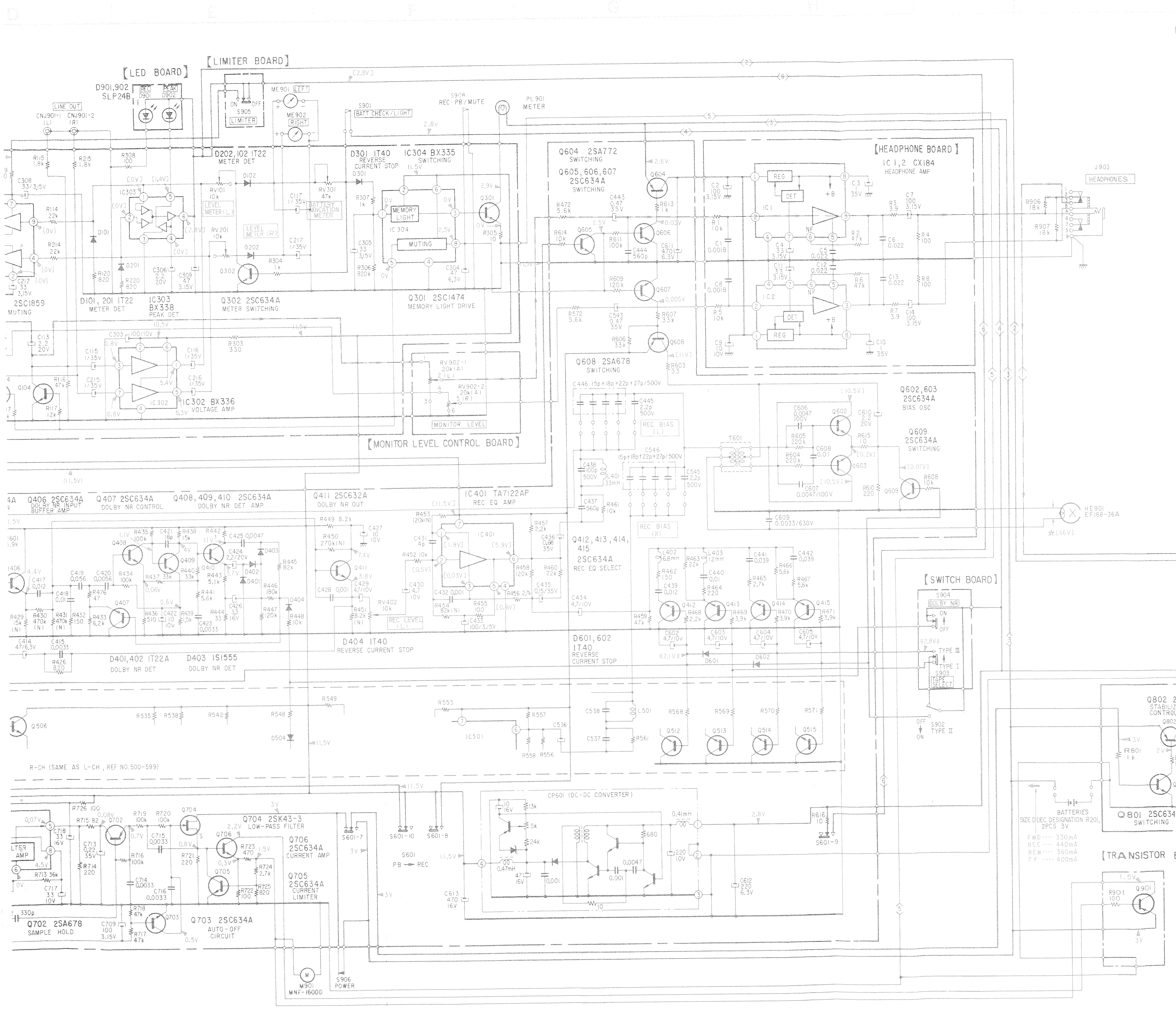

WAVEFORM SHAPING
TRIGGER PULSE GENERATOR
COMPARATOR
FILTER DC AMP
REG
IC702
G
Vcc
①
②
③
④
⑤
⑥
⑦
⑧

- DC resistance measurements are with coils and transformers connected on the circuit board, and are approximate.

4-2. SCHEMATIC DIAGRAM



[LED BOARD]
D901,902 SLP24B
[LIMITER BOARD]
ME901 LEFT
ME902 RIGHT
S905 LIMITER
S901 BATT CHECK/LIGHT
S908 REC·PB/MUTE
PL901 METER
LINE OUT
CNJ901-1 (L)
CNJ901-2 (R)
[RECORD AMP BOARD]
Q101 2SC632A AF AMP
Q102 2SC632A BUFFER AMP
S909 REC MODE
ST
MONO
S301 MIC ATT 0dB→-20dB
CN901 MIC (L)
CN902 MIC (R/MONO)
T901
T902
[TRANSFORMER BOARD]
R-CH (SAME AS L-CH, REF NO. 200-299)
RV901-1 20k(A) REC LEVEL (L)
RV901-2 20k(A) REC LEVEL (R)
IC301 BX337 LIMITER
Q204,104 2SC1859 LINE OUT/MUTING
D101,201 1T22 METER DET
IC303 BX338 PEAK DET
IC302 BX336 VOLTAGE AMP
D202,102 1T22 METER DET
RV101 LEVEL METER (L)
RV201 LEVEL METER (R)
RV301 BATTERY INDICATION METER
Q302 2SC634A METER SWITCHING
D301 1T40 REVERSE CURRENT STOP
IC304 BX335 SWITCHING
MEMORY LIGHT
MUTING
Q301 2SC1474 MEMORY LIGHT DRIVE
RV902-1 20k(A)
RV902-2 20k(A)
MONITOR LEVEL
[MONITOR LEVEL CONTROL BOARD]
Q604 2SA772 SWITCHING
Q605,606,607 2SC634A SWITCHING
Q608 2SA678 SWITCHING
REC BIAS (L)
REC BIAS (R)
T601
[AUDIO AMP BOARD]
Q401,402 2SC632A PB EQ AMP
Q403 2SC634A PB EQ SELECT
Q404 2SC632A LINE AMP
Q601 2SC634A RIPPLE FILTER
Q406 2SC634A DOLBY NR INPUT BUFFER AMP
Q407 2SC634A DOLBY NR CONTROL
Q408,409,410 2SC634A DOLBY NR DET AMP
Q411 2SC632A DOLBY NR OUT
IC401 TA7122AP REC EQ AMP
Q412,413,414,415 2SC634A REC EQ SELECT
LCH PB INPUT
HRP901-1 PF145-3602A
HRP901-2
PB LEVEL (L)
S601 PB→REC
Q405 2SC634A LINE AMP
D401,402 1T22A DOLBY NR DET
D403 1S1555 DOLBY NR DET
D404 1T40 REVERSE CURRENT STOP
RV402 REC LEVEL (L)
D601,602 1T40 REVERSE CURRENT STOP
R-CH (SAME AS L-CH, REF NO.500-599)
S907 FWD
IC701 μPC4558C FG AMP
RM701 DM-101 SPEED DET
(AUTO-OFF DETECTION AT FF OR REW MODE)
IC702
WAVEFORM SHAPING
TRIGGER PULSE GENERATOR
COMPARATOR
FILTER DC AMP
REG
TAPE SPEED
Q704 2SK43-3 LOW-PASS FILTER
Q706 2SC634A CURRENT AMP
Q705 2SC634A CURRENT LIMITER
Q701 2SC634A AUTO-OFF CIRCUIT
IC702 CX065A SERVO CONTROL
Q702 2SA678 SAMPLE HOLD
Q703 2SC634A AUTO-OFF CIRCUIT
D701 1T40
FG901 ROTATION DET (CAPSTAN SHAFT)
CP601 (DC-DC CONVERTER)
M901 MNF-1600D
S906 POWER

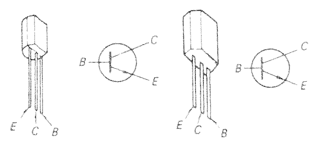

[LED BOARD]
D901,902 SLP24B
[LIMITER BOARD]
S905 LIMITER
ME901 LEFT
ME902 RIGHT
LINE OUT
CN901-1 (L)
CN901-2 (R)
D202,102 1T22 METER DET
S901 BATT CHECK/LIGHT
S908 REC·PB/MUTE
PL901 METER
D301 1T40 REVERSE CURRENT STOP
IC304 BX335 SWITCHING
MEMORY LIGHT
MUTING
Q301 2SC1474 MEMORY LIGHT DRIVE
D101,201 1T22 METER DET
IC303 BX338 PEAK DET
Q302 2SC634A METER SWITCHING
2SC1859 MUTING
IC302 BX336 VOLTAGE AMP
RV902-1 20k(A) (L)
RV902-2 20k(A) (R)
MONITOR LEVEL
[MONITOR LEVEL CONTROL BOARD]
Q604 2SA772 SWITCHING
Q605,606,607 2SC634A SWITCHING
Q608 2SA678 SWITCHING
[HEADPHONE BOARD]
IC1,2 CX184 HEADPHONE AMP
REG
DET
J903 HEADPHONES
Q602,603 2SC634A BIAS OSC
Q609 2SC634A SWITCHING
T601
REC BIAS (L)
REC BIAS (R)
HE901 EF168-36A
Q406 2SC634A DOLBY NR INPUT BUFFER AMP
Q407 2SC634A DOLBY NR CONTROL
Q408,409,410 2SC634A DOLBY NR DET AMP
Q411 2SC632A DOLBY NR OUT
IC401 TA7122AP REC EQ AMP
Q412,413,414,415 2SC634A REC EQ SELECT
D401,402 1T22A DOLBY NR DET
D403 1S1555 DOLBY NR DET
D404 1T40 REVERSE CURRENT STOP
REC LEVEL (L)
D601,602 1T40 REVERSE CURRENT STOP
[SWITCH BOARD]
S904 DOLBY NR ON OFF
S903 TAPE SELECT TYPE Ⅲ TYPE Ⅰ
S902 TYPE Ⅱ
R-CH (SAME AS L-CH, REF NO.500-599)
Q802 2SA772 STABILIZER CONTROL
Q801 2SC634A SWITCHING
CP601 (DC-DC CONVERTER)
S601 PB → REC
BATTERIES SIZE D(IEC DESIGNATION R20), 2PCS 3V
FWD···· 330mA
REC···· 440mA
REW···· 360mA
FF···· 400mA
[TRANSISTOR BOARD]
Q901 2SA861-3 SERVO AMP
Q704 2SK43-3 LOW-PASS FILTER
Q706 2SC634A CURRENT AMP
Q705 2SC634A CURRENT LIMITER
Q702 2SA678 SAMPLE HOLD
Q703 2SC634A AUTO-OFF CIRCUIT
M901 MNF-1600D
S906 POWER

Note: • All ca
50WV
• All re
kΩ : 1
• All ad
otherv
• Voltag
noted
• Readi
a VOM
• Voltag
tion to
no mar
The to
• Switc

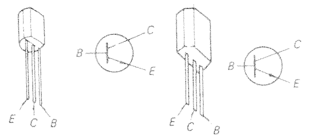
Replacement Semiconductors

For replacement, use semiconductors except in (   ).

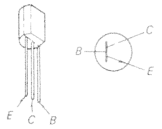
Q101, 102, 201, 202, 401, 402
Q404, 411, 501, 502, 504, 511
2SC1345 (2SC632A)


B
C
E
E C B
B
C
E
E C B

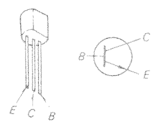
Q302, 403, 405–410
Q412–415, 503, 505–510, 512–515
Q601–603, 605–607
Q609, 701, 703, 705, 706
Q801, 803–804
2SC1364 (2SC634A)


B
C
E
E C B
B
C
E
E C B

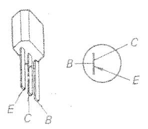
Q104, Q204: 2SC1859



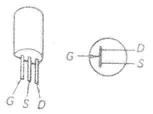
Q301: 2SC1474 (2SC1474-3)



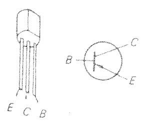
Q608, 702: 2SA1027R (2SA678)



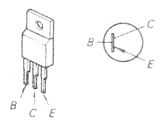
Q704: 2SK43-13 (2SK43-3)



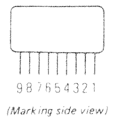
Q604, 802: 2SA772-14 (2SA772)



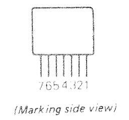
Q901: 2SA861



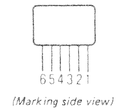
IC301: BX337


9 8 7 6 5 4 3 2 1
(Marking side view)

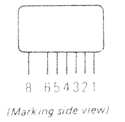
IC302: BX336


7 6 5 4 3 2 1
(Marking side view)

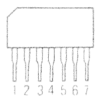
IC303: BX338


6 5 4 3 2 1
(Marking side view)

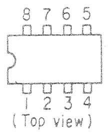
IC304: BX335


8 6 5 4 3 2 1
(Marking side view)

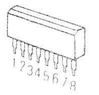
IC401, 501: TA7122BP



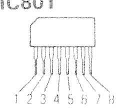
μPC4558C
IC701: (μPC4558)


8 7 6 5
1 2 3 4
(Top view)

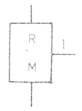
IC702: CX065A



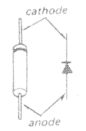
IC1, 2, IC801: CX184



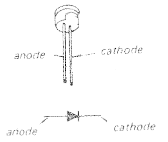
RM701: DM101



D101, 103
D102, 104
D401, 402, 501, 502
1T22AM (1T22)
D301, 404, 504
D601, 602
1S1555 (1T40)
D403, 503, 701
1S1555


cathode
anode

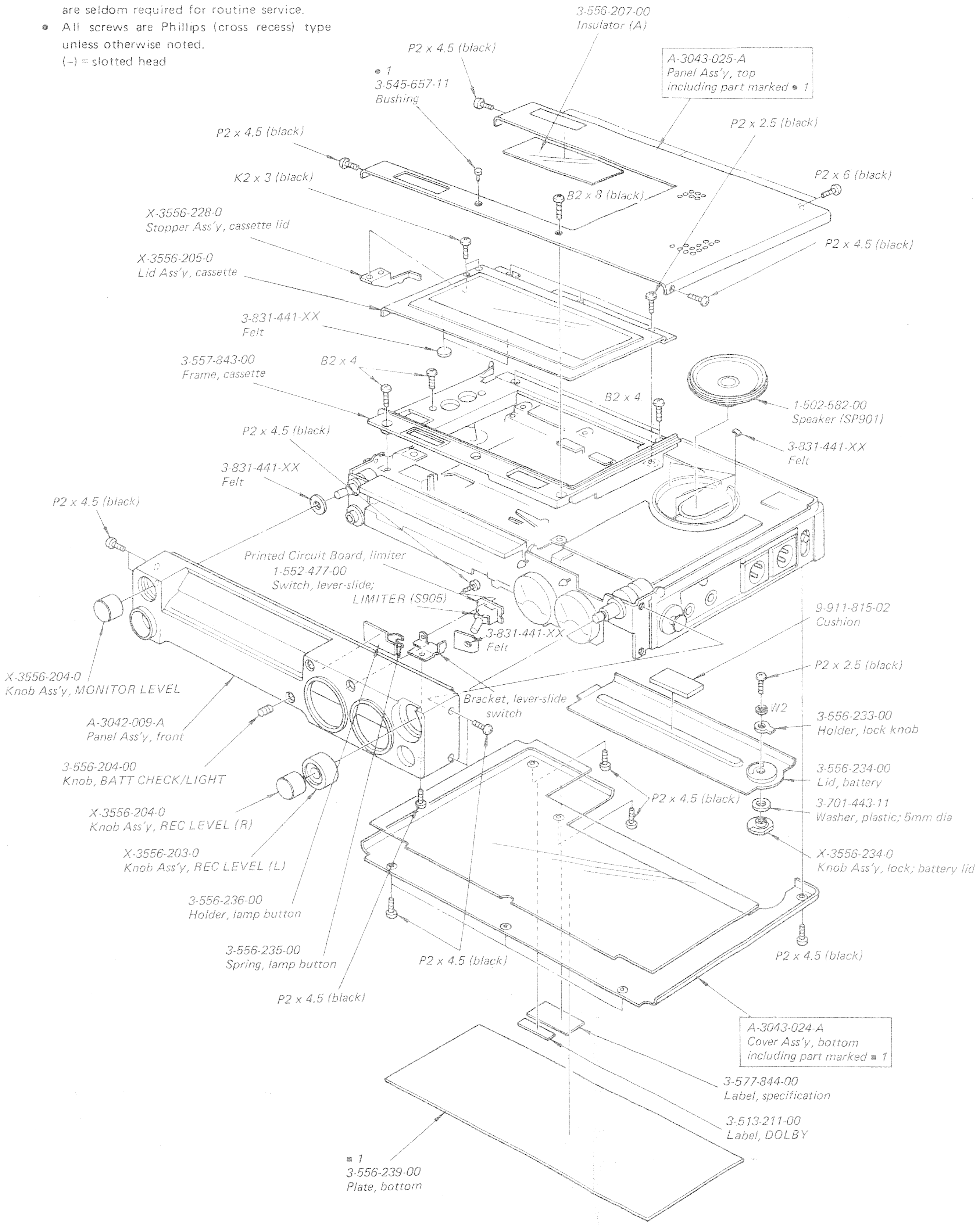
D901, 902
SLP24B


anode
cathode
anode
cathode

SECTION 5
EXPLODED VIEWS

5-1. Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head

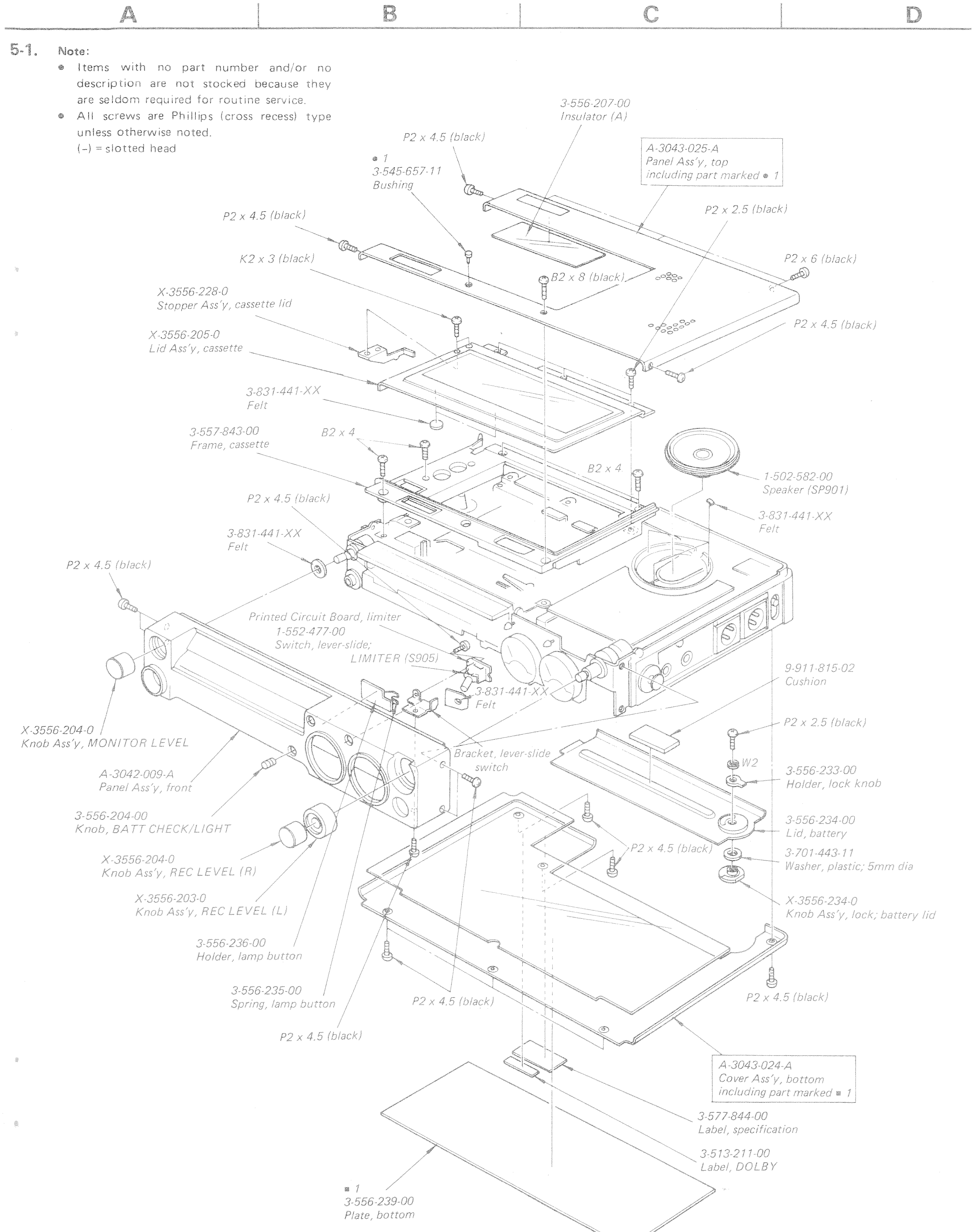

A
B
C
D
1
2
3
4
5
3-556-207-00
Insulator (A)
A-3043-025-A
Panel Ass'y, top
including part marked ● 1
P2 x 4.5 (black)
● 1
3-545-657-11
Bushing
P2 x 2.5 (black)
P2 x 4.5 (black)
P2 x 6 (black)
K2 x 3 (black)
B2 x 8 (black)
X-3556-228-0
Stopper Ass'y, cassette lid
P2 x 4.5 (black)
X-3556-205-0
Lid Ass'y, cassette
3-831-441-XX
Felt
3-557-843-00
Frame, cassette
B2 x 4
B2 x 4
1-502-582-00
Speaker (SP901)
P2 x 4.5 (black)
3-831-441-XX
Felt
3-831-441-XX
Felt
P2 x 4.5 (black)
Printed Circuit Board, limiter
1-552-477-00
Switch, lever-slide;
LIMITER (S905)
9-911-815-02
Cushion
3-831-441-XX
Felt
X-3556-204-0
Knob Ass'y, MONITOR LEVEL
P2 x 2.5 (black)
Bracket, lever-slide switch
W2
A-3042-009-A
Panel Ass'y, front
3-556-233-00
Holder, lock knob
3-556-204-00
Knob, BATT CHECK/LIGHT
3-556-234-00
Lid, battery
P2 x 4.5 (black)
X-3556-204-0
Knob Ass'y, REC LEVEL (R)
3-701-443-11
Washer, plastic; 5mm dia
X-3556-203-0
Knob Ass'y, REC LEVEL (L)
X-3556-234-0
Knob Ass'y, lock; battery lid
3-556-236-00
Holder, lamp button
P2 x 4.5 (black)
3-556-235-00
Spring, lamp button
P2 x 4.5 (black)
P2 x 4.5 (black)
A-3043-024-A
Cover Ass'y, bottom
including part marked ■ 1
3-577-844-00
Label, specification
3-513-211-00
Label, DOLBY
■ 1
3-556-239-00
Plate, bottom

5-2.

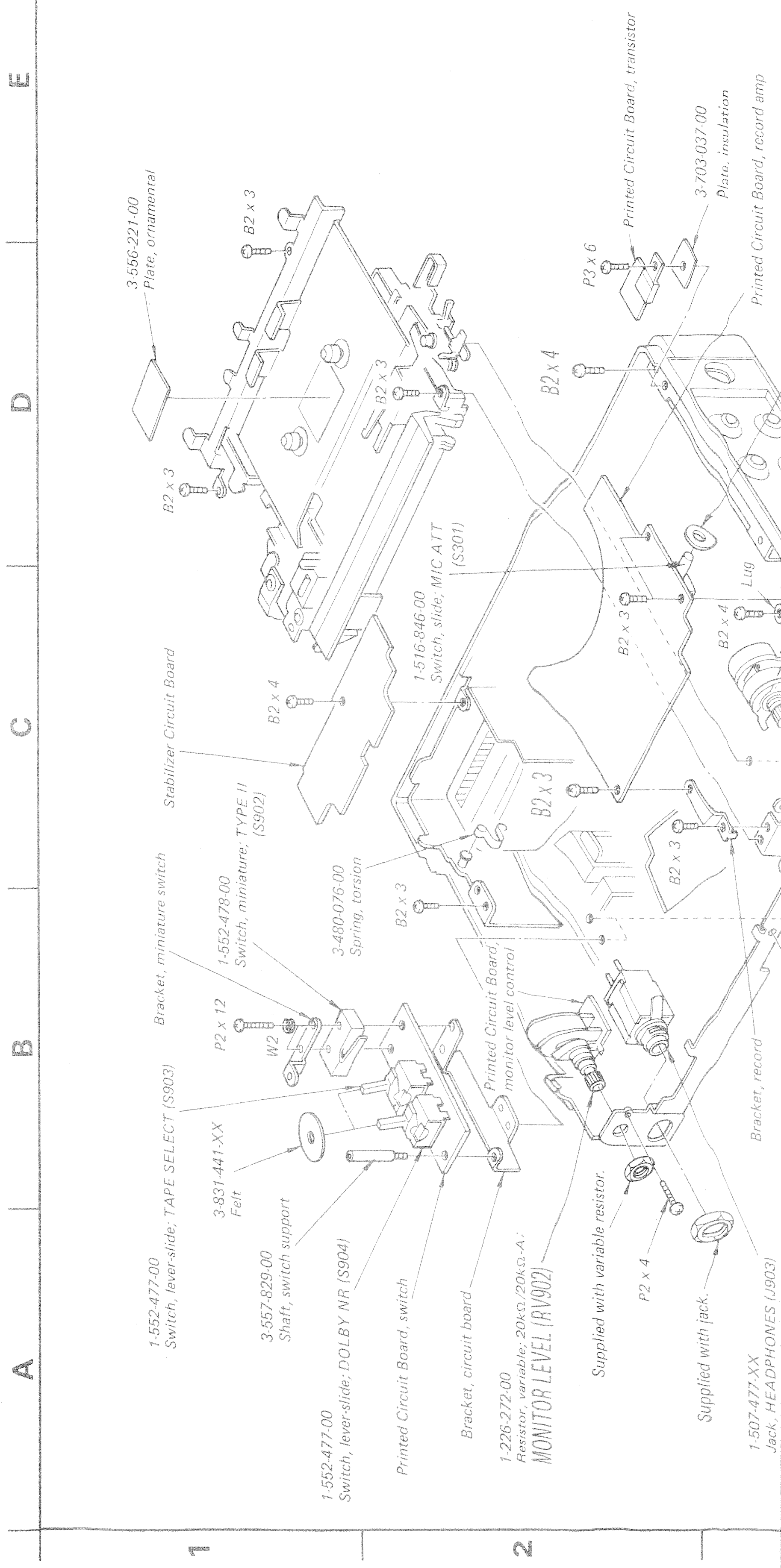
SECTION 5
EXPLODED VIEWS

5-1.

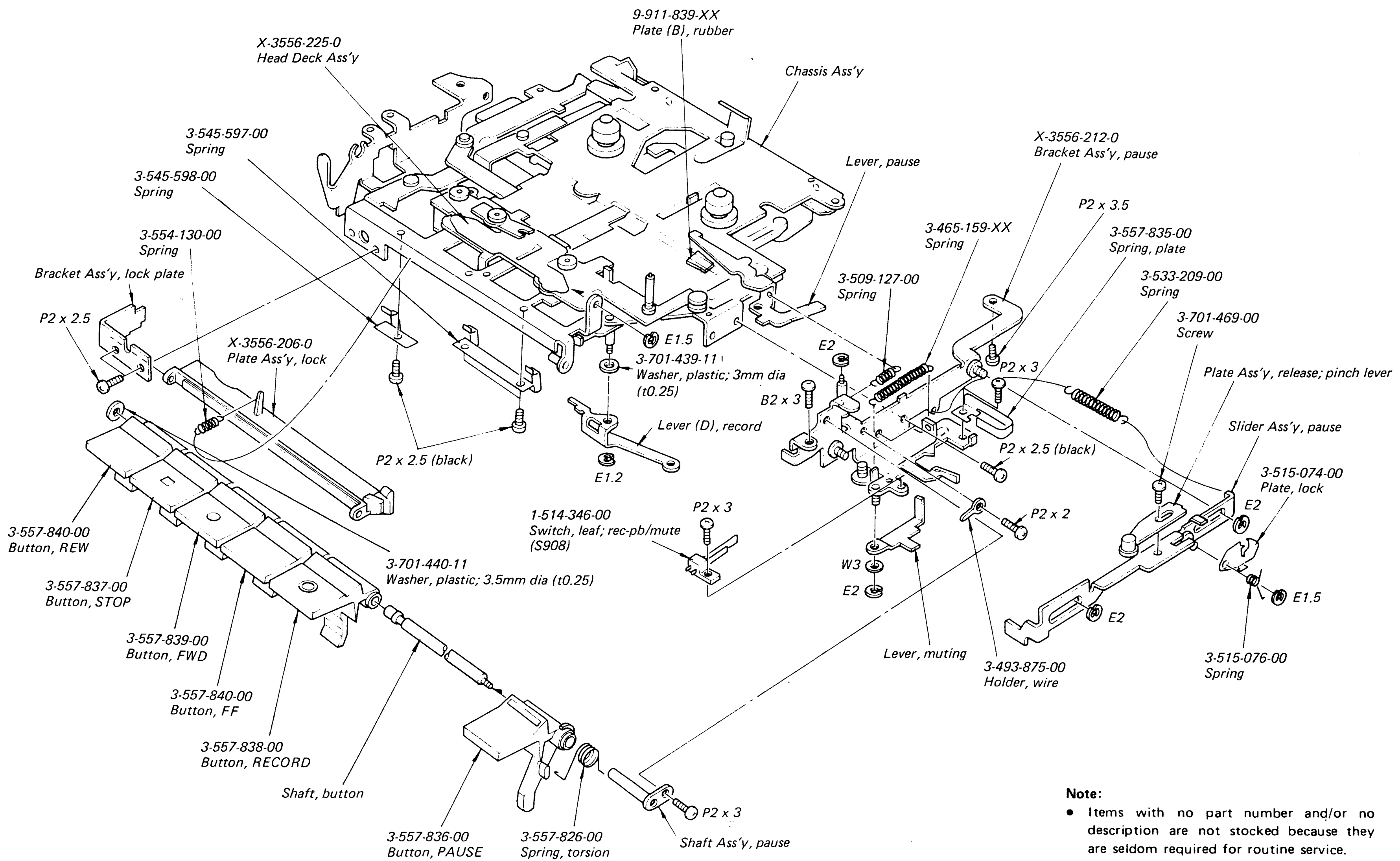
Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head


A
B
C
D
3-556-207-00
Insulator (A)
P2 x 4.5 (black)
● 1
3-545-657-11
Bushing
A-3043-025-A
Panel Ass'y, top
including part marked ● 1
P2 x 4.5 (black)
P2 x 2.5 (black)
K2 x 3 (black)
B2 x 8 (black)
P2 x 6 (black)
X-3556-228-0
Stopper Ass'y, cassette lid
P2 x 4.5 (black)
X-3556-205-0
Lid Ass'y, cassette
3-831-441-XX
Felt
3-557-843-00
Frame, cassette
B2 x 4
B2 x 4
1-502-582-00
Speaker (SP901)
P2 x 4.5 (black)
3-831-441-XX
Felt
3-831-441-XX
Felt
P2 x 4.5 (black)
Printed Circuit Board, limiter
1-552-477-00
Switch, lever-slide;
LIMITER (S905)
3-831-441-XX
Felt
9-911-815-02
Cushion
X-3556-204-0
Knob Ass'y, MONITOR LEVEL
Bracket, lever-slide switch
P2 x 2.5 (black)
W2
A-3042-009-A
Panel Ass'y, front
3-556-233-00
Holder, lock knob
3-556-204-00
Knob, BATT CHECK/LIGHT
3-556-234-00
Lid, battery
P2 x 4.5 (black)
X-3556-204-0
Knob Ass'y, REC LEVEL (R)
3-701-443-11
Washer, plastic; 5mm dia
X-3556-203-0
Knob Ass'y, REC LEVEL (L)
X-3556-234-0
Knob Ass'y, lock; battery lid
3-556-236-00
Holder, lamp button
3-556-235-00
Spring, lamp button
P2 x 4.5 (black)
P2 x 4.5 (black)
P2 x 4.5 (black)
A-3043-024-A
Cover Ass'y, bottom
including part marked ■ 1
3-577-844-00
Label, specification
3-513-211-00
Label, DOLBY
■ 1
3-556-239-00
Plate, bottom

5-2.


E
D
C
B
A
1
2
3-556-221-00
Plate, ornamental
B2 x 3
B2 x 3
B2 x 3
P3 x 6
Printed Circuit Board, transistor
3-703-037-00
Plate, insulation
Printed Circuit Board, record amp
B2 x 4
1-516-846-00
Switch, slide; MIC ATT (S301)
Lug
B2 x 3
B2 x 4
Stabilizer Circuit Board
B2 x 4
B2 x 3
Bracket, miniature switch
1-552-478-00
Switch, miniature; TYPE II (S902)
3-480-076-00
Spring, torsion
B2 x 3
B2 x 3
P2 x 12
W2
Printed Circuit Board, monitor level control
1-552-477-00
Switch, lever-slide; TAPE SELECT (S903)
3-831-441-XX
Felt
Bracket, record
3-557-829-00
Shaft, switch support
1-552-477-00
Switch, lever-slide; DOLBY NR (S904)
Printed Circuit Board, switch
Bracket, circuit board
1-226-272-00
Resistor, variable; 20kΩ/20kΩ-A;
MONITOR LEVEL (RV902)
Supplied with variable resistor.
P2 x 4
Supplied with jack.
1-507-477-XX
Jack, HEADPHONES (J903)

5-3.

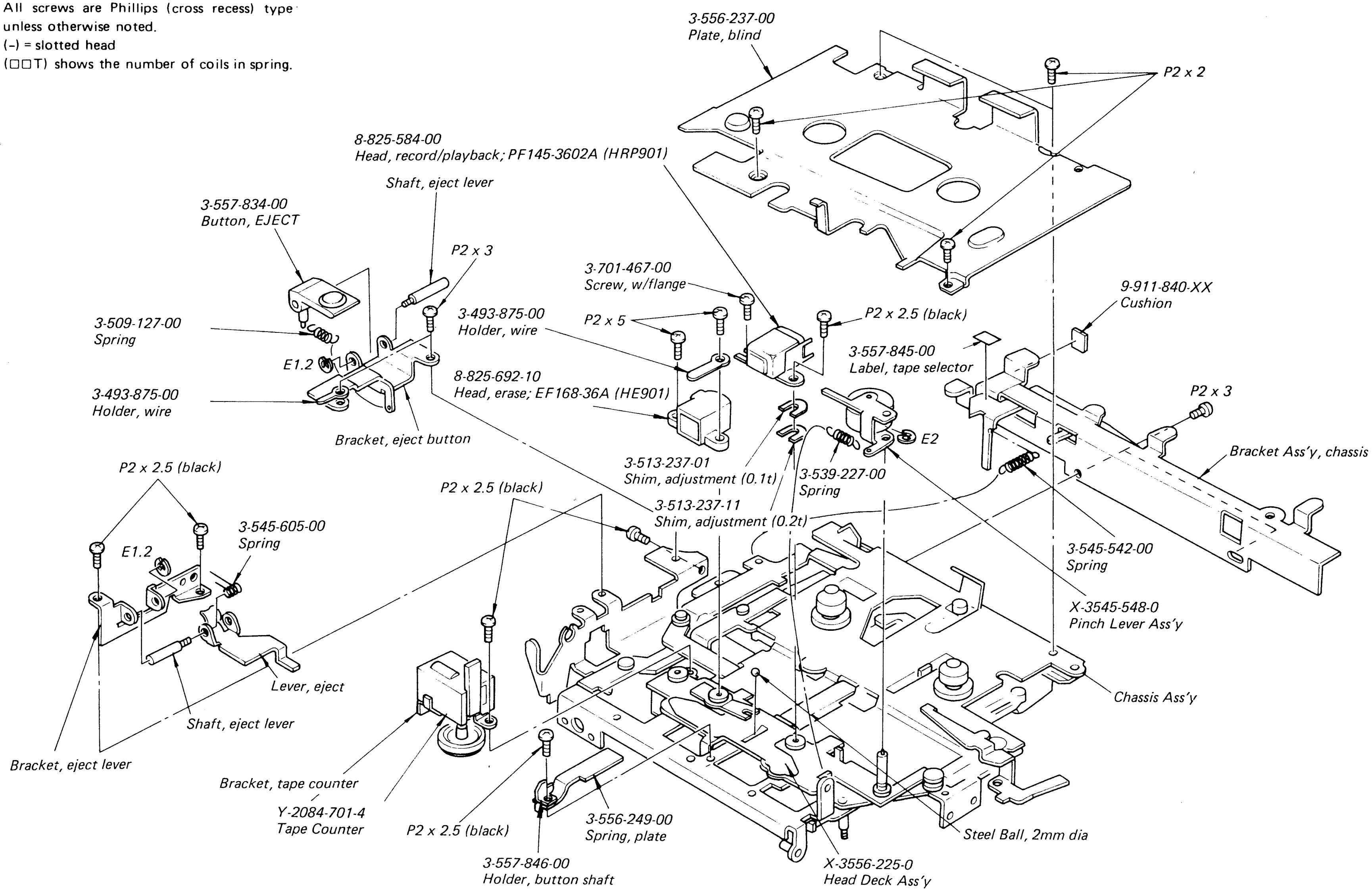

A
B
C
D
E
1
2
3
4
9-911-839-XX
Plate (B), rubber
X-3556-225-0
Head Deck Ass'y
Chassis Ass'y
3-545-597-00
Spring
3-545-598-00
Spring
Lever, pause
X-3556-212-0
Bracket Ass'y, pause
P2 x 3.5
3-557-835-00
Spring, plate
3-533-209-00
Spring
3-465-159-XX
Spring
3-509-127-00
Spring
3-701-469-00
Screw
3-554-130-00
Spring
Bracket Ass'y, lock plate
P2 x 2.5
X-3556-206-0
Plate Ass'y, lock
E1.5
3-701-439-11
Washer, plastic; 3mm dia
(t0.25)
E2
B2 x 3
P2 x 3
Plate Ass'y, release; pinch lever
Lever (D), record
P2 x 2.5 (black)
E1.2
P2 x 2.5 (black)
Slider Ass'y, pause
3-515-074-00
Plate, lock
E2
1-514-346-00
Switch, leaf; rec-pb/mute
(S908)
P2 x 3
P2 x 2
3-557-840-00
Button, REW
3-701-440-11
Washer, plastic; 3.5mm dia (t0.25)
3-557-837-00
Button, STOP
W3
E2
E1.5
E2
3-557-839-00
Button, FWD
Lever, muting
3-493-875-00
Holder, wire
3-515-076-00
Spring
3-557-840-00
Button, FF
3-557-838-00
Button, RECORD
Shaft, button
P2 x 3
3-557-836-00
Button, PAUSE
3-557-826-00
Spring, torsion
Shaft Ass'y, pause

Note:
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- (□□T) shows the number of coils in spring.

5-4.

Note:

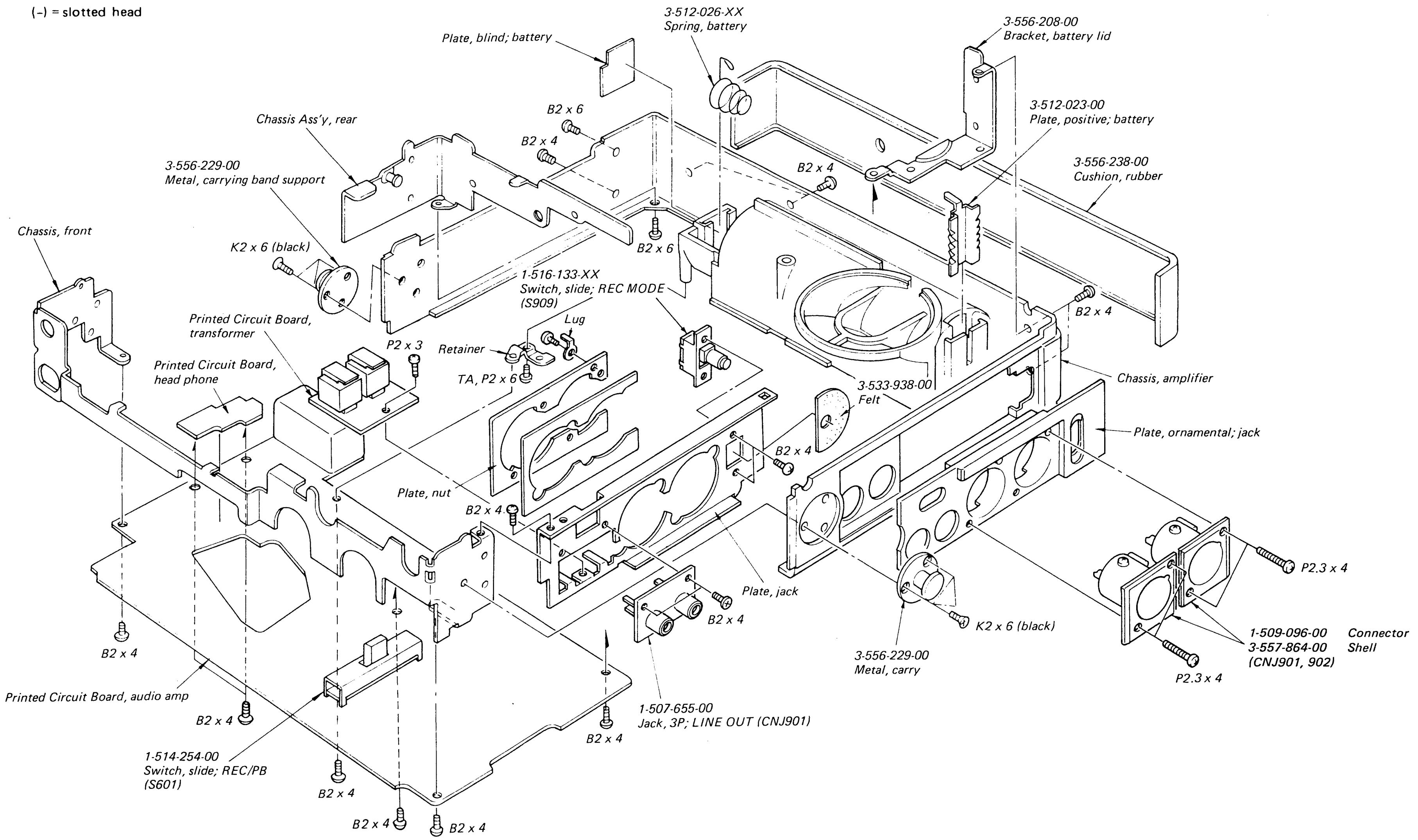
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- (□□T) shows the number of coils in spring.


A
B
C
D
E
1
2
3
4
3-556-237-00
Plate, blind
P2 x 2
8-825-584-00
Head, record/playback; PF145-3602A (HRP901)
Shaft, eject lever
3-557-834-00
Button, EJECT
P2 x 3
3-701-467-00
Screw, w/flange
9-911-840-XX
Cushion
3-509-127-00
Spring
3-493-875-00
Holder, wire
P2 x 5
P2 x 2.5 (black)
3-557-845-00
Label, tape selector
E1.2
8-825-692-10
Head, erase; EF168-36A (HE901)
P2 x 3
3-493-875-00
Holder, wire
E2
Bracket Ass'y, chassis
Bracket, eject button
3-513-237-01
Shim, adjustment (0.1t)
3-539-227-00
Spring
P2 x 2.5 (black)
P2 x 2.5 (black)
3-513-237-11
Shim, adjustment (0.2t)
3-545-605-00
Spring
E1.2
3-545-542-00
Spring
X-3545-548-0
Pinch Lever Ass'y
Lever, eject
Chassis Ass'y
Shaft, eject lever
Bracket, eject lever
Bracket, tape counter
Y-2084-701-4
Tape Counter
P2 x 2.5 (black)
3-556-249-00
Spring, plate
Steel Ball, 2mm dia
3-557-846-00
Holder, button shaft
X-3556-225-0
Head Deck Ass'y

5-5.

Note:

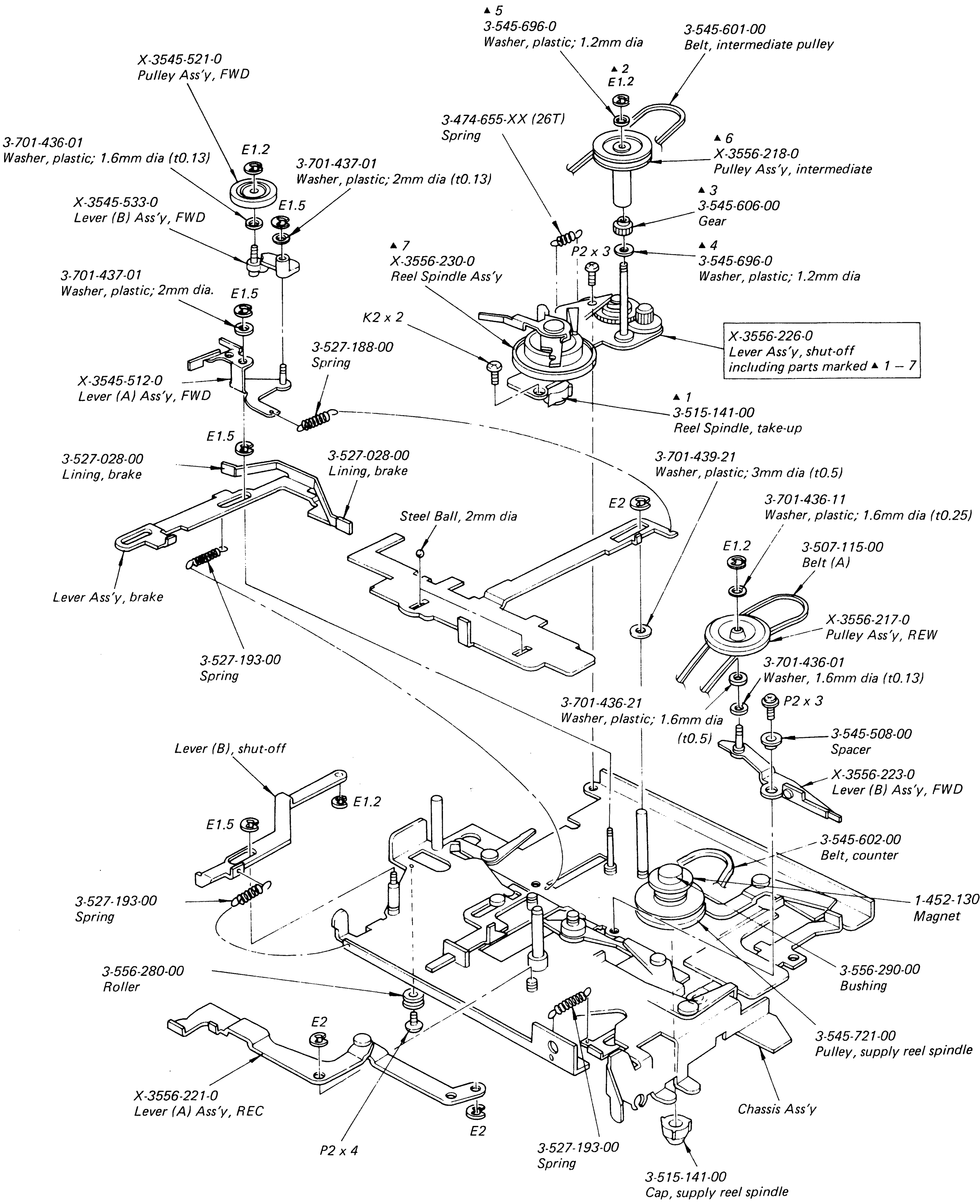
- Items with no párt number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head


A
B
C
D
E
1
2
3
4
3-512-026-XX
Spring, battery
3-556-208-00
Bracket, battery lid
Plate, blind; battery
3-512-023-00
Plate, positive; battery
B2 x 6
Chassis Ass'y, rear
B2 x 4
B2 x 4
3-556-238-00
Cushion, rubber
3-556-229-00
Metal, carrying band support
Chassis, front
K2 x 6 (black)
B2 x 6
1-516-133-XX
Switch, slide; REC MODE
(S909)
B2 x 4
Lug
Printed Circuit Board, transformer
P2 x 3
Retainer
Printed Circuit Board, head phone
TA, P2 x 6
Chassis, amplifier
3-533-938-00
Felt
Plate, ornamental; jack
B2 x 4
Plate, nut
B2 x 4
P2.3 x 4
Plate, jack
B2 x 4
K2 x 6 (black)
1-509-096-00
3-557-864-00
(CNJ901, 902)
Connector
Shell
B2 x 4
3-556-229-00
Metal, carry
P2.3 x 4
Printed Circuit Board, audio amp
B2 x 4
1-507-655-00
Jack, 3P; LINE OUT (CNJ901)
B2 x 4
1-514-254-00
Switch, slide; REC/PB
(S601)
B2 x 4
B2 x 4
B2 x 4

A B C D

1 2 3 4

5-6.


▲ 5
3-545-696-0
Washer, plastic; 1.2mm dia
3-545-601-00
Belt, intermediate pulley
X-3545-521-0
Pulley Ass'y, FWD
▲ 2
E1.2
3-474-655-XX (26T)
Spring
▲ 6
X-3556-218-0
Pulley Ass'y, intermediate
3-701-436-01
Washer, plastic; 1.6mm dia (t0.13)
E1.2
3-701-437-01
Washer, plastic; 2mm dia (t0.13)
▲ 3
3-545-606-00
Gear
X-3545-533-0
Lever (B) Ass'y, FWD
E1.5
▲ 7
X-3556-230-0
Reel Spindle Ass'y
P2 x 3
▲ 4
3-545-696-0
Washer, plastic; 1.2mm dia
3-701-437-01
Washer, plastic; 2mm dia.
E1.5
K2 x 2
X-3556-226-0
Lever Ass'y, shut-off
including parts marked ▲ 1 – 7
3-527-188-00
Spring
X-3545-512-0
Lever (A) Ass'y, FWD
▲ 1
3-515-141-00
Reel Spindle, take-up
E1.5
3-527-028-00
Lining, brake
3-527-028-00
Lining, brake
3-701-439-21
Washer, plastic; 3mm dia (t0.5)
3-701-436-11
Washer, plastic; 1.6mm dia (t0.25)
E2
Steel Ball, 2mm dia
E1.2
3-507-115-00
Belt (A)
Lever Ass'y, brake
X-3556-217-0
Pulley Ass'y, REW
3-701-436-01
Washer, 1.6mm dia (t0.13)
3-527-193-00
Spring
P2 x 3
3-701-436-21
Washer, plastic; 1.6mm dia
(t0.5)
3-545-508-00
Spacer
Lever (B), shut-off
X-3556-223-0
Lever (B) Ass'y, FWD
E1.2
E1.5
3-545-602-00
Belt, counter
3-527-193-00
Spring
1-452-130-00
Magnet
3-556-290-00
Bushing
3-556-280-00
Roller
E2
3-545-721-00
Pulley, supply reel spindle
X-3556-221-0
Lever (A) Ass'y, REC
Chassis Ass'y
E2
P2 x 4
3-527-193-00
Spring
3-515-141-00
Cap, supply reel spindle

5

Note:

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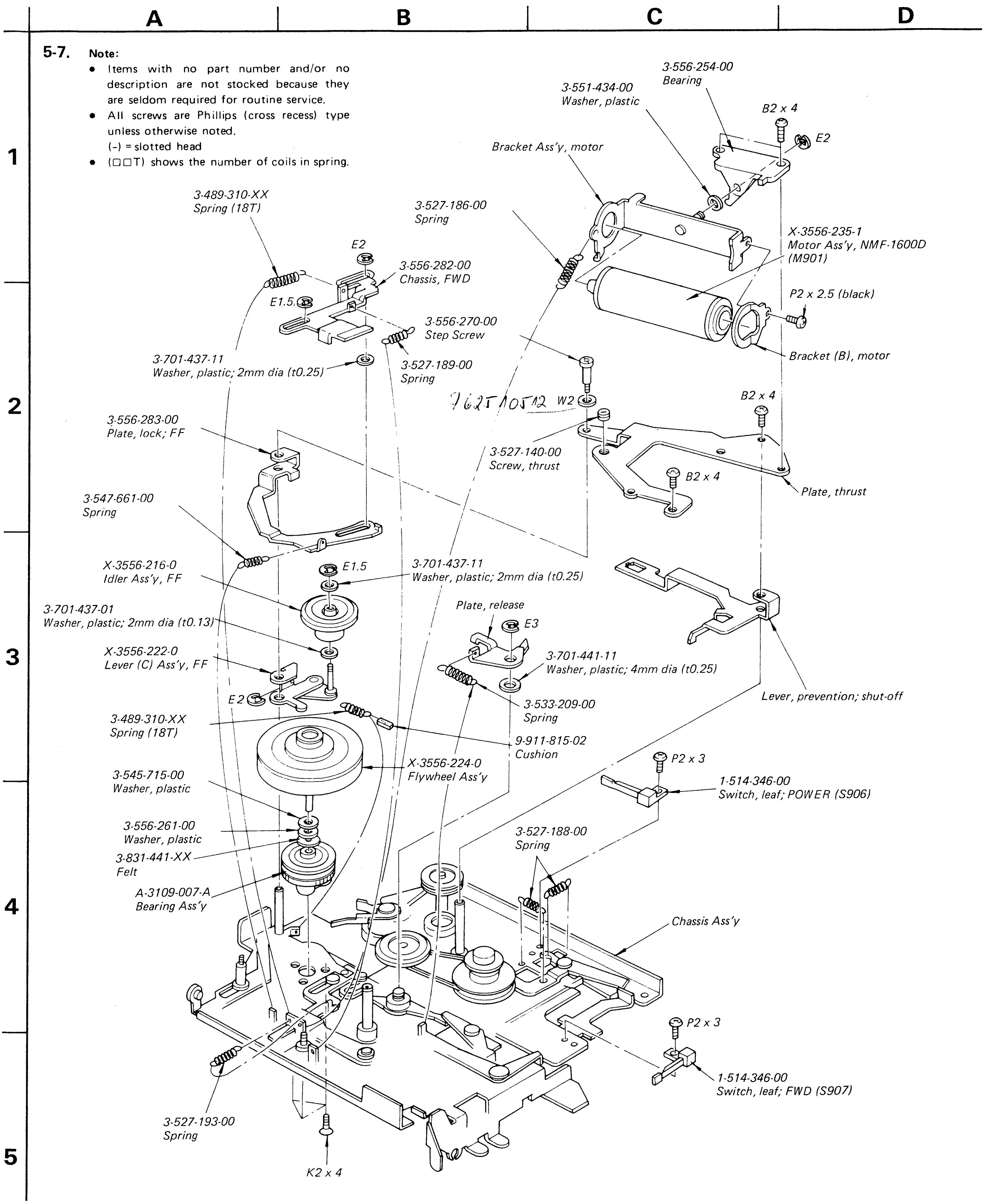
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- (□□T) shows the number of coils in spring.

5-7. **Note:**

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- (□□T) shows the number of coils in spring.


A
B
C
D
1
2
3
4
5
3-556-254-00
Bearing
3-551-434-00
Washer, plastic
B2 x 4
E2
Bracket Ass'y, motor
3-489-310-XX
Spring (18T)
3-527-186-00
Spring
X-3556-235-1
Motor Ass'y, NMF-1600D
(M901)
E2
3-556-282-00
Chassis, FWD
E1.5
P2 x 2.5 (black)
3-556-270-00
Step Screw
Bracket (B), motor
3-701-437-11
Washer, plastic; 2mm dia (t0.25)
3-527-189-00
Spring
762510512
W2
B2 x 4
3-556-283-00
Plate, lock; FF
3-527-140-00
Screw, thrust
B2 x 4
Plate, thrust
3-547-661-00
Spring
X-3556-216-0
Idler Ass'y, FF
E1.5
3-701-437-11
Washer, plastic; 2mm dia (t0.25)
Plate, release
E3
3-701-437-01
Washer, plastic; 2mm dia (t0.13)
X-3556-222-0
Lever (C) Ass'y, FF
3-701-441-11
Washer, plastic; 4mm dia (t0.25)
Lever, prevention; shut-off
E2
3-533-209-00
Spring
3-489-310-XX
Spring (18T)
9-911-815-02
Cushion
X-3556-224-0
Flywheel Ass'y
P2 x 3
3-545-715-00
Washer, plastic
1-514-346-00
Switch, leaf; POWER (S906)
3-556-261-00
Washer, plastic
3-527-188-00
Spring
3-831-441-XX
Felt
A-3109-007-A
Bearing Ass'y
Chassis Ass'y
P2 x 3
1-514-346-00
Switch, leaf; FWD (S907)
3-527-193-00
Spring
K2 x 4

SECTION 6
ELECTRICAL PARTS LIST

Ref. No.	*Part No.*	*Description*
	SEMICONDUCTORS	
	Transistors	
⇒Q101, 201 ⇒Q102, 202	8-729-334-58	2SC1345
⇒Q104, 204	8-765-052-20	2SC1859
⇒Q301	8-760-335-10	2SC1474
⇒Q302	8-729-663-47	2SC1364
⇒Q401, 501 ⇒Q402, 502	8-729-334-58	2SC1345
⇒Q403, 503	8-729-663-47	2SC1364
⇒Q404, 504	8-729-334-58	2SC1345
⇒Q405–410 ⇒Q505–510	8-729-663-47	2SC1364
⇒Q411, 511	8-729-334-58	2SC1345
⇒Q412–415 ⇒Q512–515 ⇒Q601–603	8-729-663-47	2SC1364
⇒Q604	8-760-514-00	2SA772-4
⇒Q605–607	8-729-663-47	2SC1364
Q608	8-729-612-77	2SA1027R
⇒Q609 ⇒Q701	8-729-663-47	2SC1364
Q702	8-729-612-77	2SA1027R
⇒Q703	8-729-663-47	2SC1364
⇒Q704	8-723-303-13	2SK43-13
⇒Q705, 706 ⇒Q801	8-729-663-47	2SC1364
⇒Q802	8-760-514-10	2SA772-14
⇒Q803, 804	8-729-663-47	2SC1364
Q901	8-763-213-00	2SA861
	ICs	
IC1, 2	8-751-840-00	CX184
IC302	8-751-360-00	BX336
IC303	8-751-380-00	BX338
IC304	8-751-350-00	BX335
IC401, 501	8-759-271-22	TA7122AP
⇒IC701	8-759-145-58	μPC4558C
IC702	8-759-600-65	CX065A
IC801	8-751-840-00	CX184
	Diodes	
⇒D101, 103 ⇒D102, 104	8-719-422-21	1T22AM
⇒D301	8-719-815-55	1S1555
⇒D401, 501 ⇒D402, 502	8-719-422-21	1T22AM
D403, 503	8-719-815-55	1S1555
⇒D404, 504 ⇒D601, 602	8-719-815-55	1S1555
D701	8-719-815-55	1S1555
D901, 902	8-719-900-24	SLP24B
	COILS	
L101, 201	1-407-879-00	33mH, microinductor
L102, 202	1-407-938-00	27mH, variable
L401, 501	1-407-212-XX	33mH, microinductor
L402, 502	1-407-502-XX	6.8mH, microinductor
L403, 503	1-407-207-XX	12mH, microinductor
	TRANSFORMERS	
T601	1-433-200-00	Bias Oscillator
T901, 902	1-423-242-00	Input

CAPACITORS

All capacitors are in μF and common capacitors are omitted. Refer to the lists on pages 30 and 31 for their part numbers.

C446, 546	1-107-253-00	15+18+22+27	500V	mica
C711	1-130-140-00	0.039	100V	film

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on page 32 for their resistance values. kΩ : 1000Ω

Ref. No.	*Part No.*	*Description*		
R616	1-246-759-11	10k	1/8W	carbon
R703, 704	1-209-781-11	10k	1/16W	micro
R705	1-210-840-11	220k	1/16W	micro
R707	1-210-384-11	47k	1/16W	micro
R708	1-204-122-11	1k	1/16W	micro
R709	1-210-844-11	470k	1/16W	micro
R713	1-214-169-00	36k	¼W	metal oxide
R801	1-204-122-11	1k	1/16W	micro
R802	1-246-771-11	100k	1/8W	carbon
R810	1-210-840-11	220k	1/16W	micro
R811	1-210-388-11	68k	1/16W	micro
R812	1-204-122-11	1k	1/16W	micro
R813	1-209-777-11	6.8k	1/16W	micro
R906, 907	1-246-798-11	18k	1/8W	carbon

Ref. No.	*Part No.*	*Description*
RV101,201	1-224-252-XX	10k-B, adjustable LEVEL METER
RV301	1-224-254-XX	47k-B, adjustable; BATTERY INDICATION METER
RV401,501	1-224-252-XX	10k-B, adjustable; PB LEVEL
RV402,502	1-224-252-XX	10k-B, adjustable; REC LEVEL
RV701	1-226-274-00	20k-B, adjustable; TAPE SPEED
RV901	1-226-273-00	20kΩ-A, variable; REC LEVEL
RV902	1-226-272-00	20k-A, variable; MONITOR LEVEL

SWITCHES

Ref. No.	*Part No.*	*Description*
S301	1-516-846-00	Slide, MIC ATT
S601	1-514-254-00	Slide, REC/PB
S901	1-514-346-00	Leaf, BATTERY CHECK/ LIGHT
S902	1-552-478-00	Miniature, TYPE II
S903–905	1-552-477-00	Lever-slide; TAPE SELECT, DOLBY NR, LIMITER
S906–908	1-514-346-00	Leaf, POWER, FWD, rec-pb/mute
S909	1-516-133-XX	Slide, REC MODE

JACKS

Ref. No.	*Part No.*	*Description*
CN901,902	1-509-096-00	Connector
	3-557-864-00	Shell
CNJ901	1-507-655-00	LINE OUT
J903	1-507-477-XX	HEADPHONES

MISCELLANEOUS

Ref. No.	*Part No.*	*Description*
CP601	1-464-081-00	DC-DC Converter
HE901	8-825-692-00	Head, erase; EF168-36A
HRP901	8-825-584-00	Head, record/playback; PF145-3602A
M901	X-3556-235-1	Motor Ass'y
ME901	1-520-350-00	Meter, level (LEFT)
ME902	1-520-351-00	Meter, level (RIGHT)
PL901	1-518-134-XX	Lamp 100mA/2V
RM701	8-845-101-01	Head, speed detecting DM-101
SP901	1-502-582-00	Speaker
	1-452-130-00	Magnet

ACCESSORIES AND PACKING MATERIALS

Part No.	*Description*
X-3556-239-1	Belt Ass'y, carring
X-3701-105-1	Tip Ass'y, head cleaning
1-551-734-11	Cord, connector; RK-74A
3-527-213-02	Label, serial number
3-557-848-01	Box, accessories
3-557-850-01	Cushion
3-557-859-01	Label, specification
3-557-873-01	Case, carrying
3-557-874-01	Belt
3-557-875-01	Spacer, carrying case
3-557-876-01	Carton
3-701-625-01	Bag, plastic
3-701-631-01	Bag, plastic
3-770-908-51	Manual, instruction
3-793-828-11	Card, cassette caution
3-882-538-02	Metal, carrying adjust

ELECTROLYTIC CAPACITORS

Note: Circled letter (Ⓐ to Ⓩ) are applicable to European models only.

CAP. (μF)			RATING		→ : Use the high voltage rated one.	
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00 Ⓐ
1.0					→	1-121-391-00 Ⓐ
2.2					→	1-121-450-00 Ⓐ
3.3	→	→	→	1-121-392-00 Ⓐ	→	1-121-393-00 Ⓐ
4.7	→	→	→	1-121-395-00 Ⓐ	→	1-121-396-00 Ⓐ
10	→	→	1-121-651-00 Ⓐ	1-121-398-00 Ⓐ	→	1-121-738-00 Ⓐ
22	→	→	1-121-479-00 Ⓐ	1-121-480-00 Ⓐ	1-121-662-00 Ⓐ	1-121-152-00 Ⓐ
33	→	→	1-121-403-00 Ⓐ	1-121-404-00 Ⓐ	1-121-652-00 Ⓑ	1-121-405-00 Ⓐ
47	→	1-121-352-00 Ⓐ	1-121-409-00 Ⓐ	1-121-410-00 Ⓐ	1-121-653-00 Ⓑ	1-121-411-00 Ⓐ
100	→	1-121-414-00 Ⓐ	1-121-415-00 Ⓐ	1-121-416-00 Ⓐ	1-121-357-00 Ⓑ	1-121-417-00 Ⓑ
220	1-121-419-00 Ⓑ	1-121-420-00 Ⓑ	1-121-421-00 Ⓐ	1-121-422-00 Ⓑ	1-121-261-00 Ⓒ	1-121-423-00 Ⓑ
330	1-121-751-00 Ⓑ	1-121-805-00 Ⓑ	1-121-521-00 Ⓒ	1-121-654-00 Ⓑ	1-121-655-00 Ⓓ	1-121-656-00 Ⓒ
470	1-121-424-00 Ⓑ	1-121-425-00 Ⓒ	1-121-426-00 Ⓒ	1-121-733-00 Ⓑ	1-121-361-00 Ⓔ	1-121-810-00 Ⓓ
1000	–	1-121-736-00 Ⓒ	1-121-245-00 Ⓓ	1-121-657-00 Ⓓ	1-121-388-00 Ⓔ	1-123-061-00 Ⓕ
2200	1-121-658-00 Ⓑ	1-121-659-00 Ⓒ	1-121-660-00 Ⓓ	1-123-067-00 Ⓕ	1-121-984-00 Ⓕ	–
3300	1-121-661-00 Ⓓ	1-123-075-00 Ⓔ	1-123-071-00 Ⓕ	–	–	–

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	–	–	–	–
1.0	1-123-249-00 Ⓐ	1-123-252-00 Ⓐ	1-123-003-00 Ⓑ	1-121-168-00 Ⓑ
2.2	1-123-250-00 Ⓐ	1-123-026-00 Ⓑ	–	1-123-028-00 Ⓑ
3.3	1-121-995-00 Ⓐ	–	1-123-004-00 Ⓑ	1-123-006-00 Ⓒ
4.7	1-123-255-00 Ⓐ	1-121-246-00 Ⓑ	1-121-759-00 Ⓑ	1-123-007-00 Ⓓ
10	1-121-126-00 Ⓑ	1-121-999-00 Ⓑ	1-123-254-00 Ⓒ	1-123-008-00 Ⓓ
22	1-121-996-00 Ⓒ	1-123-253-00 Ⓒ	1-123-005-00 Ⓓ	1-123-022-00 Ⓓ
33	1-121-997-00 Ⓒ	1-121-757-00 Ⓒ	–	–
47	1-123-251-00 Ⓒ	1-121-919-00 Ⓒ	–	–
100	1-123-084-00 Ⓔ	–	–	–

CERAMIC CAPACITORS Ⓐ

				RATING			
CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS Ⓐ

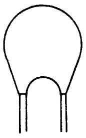
			RATING	→ : Use the high voltage rated one.	
CAP. (μF)	25 VOLT.	50 VOLT.	CAP. (μF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

MYLAR CAPACITORS Ⓐ

Note: Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

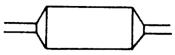
	RATING										
CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	–	–
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	–	–
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	–	–
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	–	–
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

TANTALUM CAPACITORS



			RATING		→: Use the high voltage rated one.		
CAP. (μF)	3.15 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	25 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.01					→	→	1-131-396-00 Ⓑ
0.015						→	1-131-397-00 Ⓑ
0.022						→	1-131-398-00 Ⓑ
0.033						→	1-131-399-00 Ⓑ
0.047						→	1-131-400-00 Ⓑ
0.068					→	→	1-131-401-00 Ⓑ
0.1					→	→	1-131-402-00 Ⓑ
0.15					→	→	1-131-403-00 Ⓑ
0.22					→	→	1-131-404-00 Ⓑ
0.33					→	1-131-409-00 Ⓑ	1-131-405-00 Ⓑ
0.47	–	–	–	–	1-131-412-00 Ⓑ	→	1-131-406-00 Ⓑ
0.68	–	–	–	1-131-415-00 Ⓑ	→	1-131-410-00 Ⓑ	1-131-407-00 Ⓑ
1.0	–	–	1-131-418-00 Ⓑ	–	1-131-413-00 Ⓑ	→	1-131-408-00 Ⓑ
1.5	–	1-131-421-00 Ⓑ	–	1-131-416-00 Ⓑ	→	1-131-411-00 Ⓑ	1-131-348-00 Ⓑ
2.2	1-131-424-00 Ⓑ	–	1-131-419-00 Ⓑ	–	1-131-414-00 Ⓑ	1-131-355-00 Ⓑ	1-131-349-00 Ⓑ
3.3	–	1-131-422-00 Ⓑ	–	1-131-417-00 Ⓑ	1-131-362-00 Ⓑ	1-131-356-00 Ⓑ	1-131-350-00 Ⓑ
4.7	1-131-425-00 Ⓑ	–	1-131-420-00 Ⓑ	1-131-369-00 Ⓑ	1-131-363-00 Ⓑ	1-131-357-00 Ⓑ	1-131-351-00 Ⓒ
6.8	–	1-131-423-00 Ⓑ	1-131-376-00 Ⓑ	1-131-370-00 Ⓑ	1-131-364-00 Ⓑ	1-131-358-00 Ⓒ	1-131-352-00 Ⓒ
10	1-131-426-00 Ⓑ	1-131-383-00 Ⓑ	1-131-377-00 Ⓑ	1-131-371-00 Ⓑ	1-131-365-00 Ⓒ	1-131-359-00 Ⓒ	1-131-353-00 Ⓓ
15	1-131-390-00 Ⓑ	1-131-384-00 Ⓑ	1-131-378-00 Ⓑ	1-131-372-00 Ⓑ	1-131-366-00 Ⓒ	1-131-360-00 Ⓓ	–
22	1-131-391-00 Ⓑ	1-131-385-00 Ⓑ	1-131-379-00 Ⓒ	1-131-373-00 Ⓒ	1-131-367-00 Ⓓ		
33	1-131-392-00 Ⓑ	1-131-386-00 Ⓒ	1-131-380-00 Ⓒ	1-131-374-00 Ⓓ			
47	1-131-393-00 Ⓒ	1-131-387-00 Ⓒ	1-131-381-00 Ⓓ	–			
68	1-131-394-00 Ⓑ	1-131-388-00 Ⓒ	–	–			
100	1-131-395-00 Ⓓ	–	–	–			

TANTALUM CAPACITORS



				RATING		
CAP. (μF)	3 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.033						1-131-273-00 Ⓔ
0.047						1-131-274-00 Ⓔ
0.068						1-131-275-00 Ⓔ
0.1						1-131-276-00 Ⓓ
0.15						1-131-277-00 Ⓓ
0.22			–	–	1-131-262-00 Ⓓ	1-131-278-00 Ⓓ
0.33			–	–	1-131-263-00 Ⓓ	1-131-279-00 Ⓓ
0.47			1-131-169-00 Ⓓ	–	1-131-264-00 Ⓓ	1-131-280-00 Ⓓ
0.68			–	1-131-258-00 Ⓓ	1-131-265-00 Ⓓ	1-131-281-00 Ⓓ
1.0			1-131-254-00 Ⓓ	–	1-131-266-00 Ⓓ	1-131-282-00 Ⓓ
1.5		1-131-250-00 Ⓓ	–	–	1-131-267-00 Ⓓ	1-131-283-00 Ⓔ
2.2		–	–	1-131-259-00 Ⓓ	1-131-268-00 Ⓓ	1-131-284-00 Ⓔ
3.3		–	1-131-255-00 Ⓓ	–	1-131-269-00 Ⓓ	–
4.7		1-131-251-00 Ⓔ	1-131-171-00 Ⓓ	–	1-131-270-00 Ⓓ	–
6.8		–	–	1-131-260-00 Ⓓ	1-131-271-00 Ⓔ	–
10	–	–	1-131-256-00 Ⓓ	–	1-131-272-00 Ⓔ	–
15	–	1-131-252-00 Ⓓ	–	1-131-261-00 Ⓔ		
22	–	–	1-131-257-00 Ⓔ	–		
33	1-131-176-00 Ⓓ	1-131-253-00 Ⓔ	1-131-173-00 Ⓒ	–		
47	1-131-288-00 Ⓕ	1-131-174-00 Ⓓ	–	–		
100	1-131-177-00 Ⓓ					

1/4 WATT CARBON RESISTORS Ⓐ

Note: Circled letter Ⓐ is applicable to European models only.

Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-576-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-577-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-578-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-579-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-580-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-581-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-582-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-583-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-584-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-585-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-586-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-587-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:

– P 3 x 10

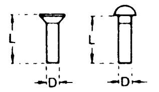
L: Length in mm

D: Diameter in mm

Type of head

Indicated slotted-head only.

Unless otherwise indicated, it means cross-recessed head (Phillips type).



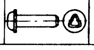
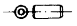
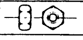
Reference Designation	Shape	Description	Remarks
		SCREWS	
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Nut, Washer, Retaining ring:

N 3

Diameter of usable screw or shaft

Reference designation

Reference Designation	Shape	Description	Remarks
		SELF-TAPPING SCREWS	
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
		NUT	
N		nut	
		WASHERS	
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E		retaining ring	
G		grip-type retaining ring	

MEMO

Sony Corporation

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